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ABSTRACT

This report constitutes an evaluation of the first year of a 2-year training program conducted by the American Management Association. The program focuses on organizational planning in two State educational agencies and involves the sequential implementation of three distinct, offsite, residential training efforts. The first of these, the Management Course for Presidents (MCP), was attended by the State Superintendent. The second program, Top Management Briefing (TMB), was administered to the top 24 administrators from the State agency and the 24 top administrators from pilot, local education agencies. The third program, the Educational Planning Process, was administered to organizational teams primarily composed of persons who attended the TMB. Analysis of interview and questionnaire data revealed that the training program did not change attitudes toward management and planning, and that some positive training effects occurred in role relationships and group standards. In addition, the organization that showed some effects or changes attributable to training was also consistently lower on all of the measurement variables than either the other Experimental State or the Control. Related documents are EA 004 141-145. (Author)

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Final Report

Project No. 0-0793
Grant No. OEG-0-70-5073

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ADAPTING AND TESTING BUSINESS MANAGEMENT DEVELOPMENT PROGRAMS FOR EDUCATIONAL ADMINISTRATORS

Volume 6 of 6 Volumes

January 1972

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Volume 6 of 6 Volumes
Appendix J--Evaluation Report by Maxwell School
Appendix K--Schematic of Planning Process and Narrative Description
Appendix L--Narrative Description

Raymond E. Klawuhn
Alexander J. Basso

American Management Association
Center for Planning and Development

Hamilton, New York

January, 1972

The research reported herein was performed persuant to a grant with the Office of Education, U.S. Department of Health, Education, and Welfare. Contractors undertaking such projects under Government sponsorship are encouraged to express freely their professional judgment in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent official Office of Education position or policy.

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SYRACUSE UNIVERSITY

THE MAXWELL SCHOOL OF CITIZENSHIP AND PUBLIC AFFAIRS | SYRACUSE, NEW YORK 13210

OFFICE OF THE DEAN | MAXWELL HALL

October 1, 1971

Dr. Franklyn S. Barry, Director
Center for Planning and Development
National American Management Association
Hamilton, New York

Dear Dr. Barry:

Herewith the evaluation report on the AMA training programs with the State Offices of Education.

As I have noted on a number of occasions, an evaluation of events and changes during the training year is in many ways not as good an indicator of AMA's impact or the value received for education in the States involved as a study of what happens in the States after training is completed. For this reason, I believe that the integrated two-year evaluation report which I expect to file with USOE one year from now will tell more about the impact of the training upon educational planning and administration within the States. Thus, there is some sense in which the present evaluation is premature or preliminary.

Still, we agreed to file a one-year evaluation report with you and hereby do so. The report represents the efforts of Professor Larry Kirkhart and Mr. W. Lynn Tanner working under my direction. I trust that our findings will be of assistance to you and your colleagues. The research team appreciates very much the cooperation afforded it by your colleagues and by officials within the States which were studied.

If I can be of further assistance, please do not hesitate to call upon me.

Sincerely,

Frank Marini

Frank Marini
Associate Dean

FM/ajm

encs.

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EVALUATION REPORT
Project No. 0-0793
Grant No. OEG-0-70-5073

EVALUATION FOR CENTER FOR PLANNING AND DEVELOPMENT OF THE AMERICAN MANAGEMENT ASSOCIATION

Frank Marini
Associate Dean
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October, 1971

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HEALTH, EDUCATION, AND WELFARE

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SUMMARY

This report constitutes the first year's evaluation of a training program conducted by the American Management Association. The program is focused on organizational planning in two State Educational Agencies and involves the sequential implementation of three distinct, off-site, residential training efforts.

The first of these, the Management Course for Presidents (hereafter MCP) was to be attended by one representative from the Educational Agency--the State Superintendent. The second program, Top Management Briefing (hereafter TMB) was administered to the top twenty-four administrators from the State Agency and twenty-four top administrators drawn from pilot, local Education Agencies. The third program, the Educational Planning Process, was administered to organizational teams which were primarily composed of persons who attended the TMB.

Both the MCP and TMB are one week didactic training programs concerned with two general issues--professional management and organizational planning. The third program is exclusively focused on organizational planning and entails two one week programs with an interium period of at least four weeks between sessions.

Based on a typology training program the previously mentioned programs were examined and categorized. Two areas were identified as the receipient of greatest impact from the training; the program depended upon these areas to create organizational change. These areas are: (1) individual awareness/knowledge and (2) role relationships and group standards.

In order to provide a more systematic and valid basis from which training effects could be assessed, a control group was added to the population of organizations studied. Inclusion of the Control group produced a Non-Equivalent Control Group research design.

Two measurement techniques were developed to assess the presence or absence of change--(1) semi-structured interviews which were taped and submitted to content analysis and (2) a survey questionnaire. The first of these methodologies was applied to the top twenty-four administrators in the two Experimental States and the Control State. The second methodology was applied to a specially selected population of approximately seventy-two people in each of the three organizations.

Both of these methodologies were constructed in such a way that they provided overlapping measurement. This was done in order to reduce the problem of reactive measurement and enable the exploration of the training program from different perspectives.

Analysis of the content and questionnaire data related to the expressed goals of the training program revealed very little change

occurred that could be attributed to the training program in either of the Experimental States.

Analysis of the data related to role relationship and group standards indicated a mixed, albeit very limited, impact of the training in one of the Experimental organizations and virtually no impact in the second organization.

Overall, we conclude that the training program did not change attitudes toward management and planning in one of the organizations. In the case of the second organization some positive training effects occurred in the area of role relationships and group standards. This impact was an unanticipated consequence of modifying the period of time allocated to training in this organization. In addition, the organization which showed some effects or changes attributable to training also was consistently lower on all of the measurement variables than either the other Experimental State or the Control.

Since this was the first year of a two year evaluation program and since the training program was completed very recently, no organizational output measures were included in the study.

Professionalizing Management and Planning: A Strategy for Change

Introduction

This report is divided into three sections. The first of these is a description of the American Management Association's (hereafter AMA) training effort with two State Departments of Education. The AMA training program was called "Adapting and Testing Business Management Development Programs for Educational Administrators". In this section attention will be given to the training design, substantive content areas, and change targets. In short, the reader should receive a general picture of the program's orientation and change strategy.

The second section is research methodology. The research design, methodologies, data gathering techniques and statistical tools will be presented. Particular emphasis will be given to the strengths and weakness of the research design and the impact it has on the interpretation of the research findings.

The third section will present the research findings, an interpretation of data, overall conclusions, and recommendations.

Adapting and Testing Business Management Programs for Educational Administrators

The program which we are about to describe was, as evidenced by its title, developed by working with a business clientele over a period of years;[1] this was the first comprehensive application to public educational institutions at the State level. The training extended from the top levels of State education organizations to local educational districts. The program is described as a pilot project to determine what types of adaptations were necessary in this context, while maintaining the basic integrity of the previous program design, conceptualization, and implementation strategy.

Fourteen specific goals were to be addressed. These goals were stated in terms of degree of achievement; in other words, the training proposal specified that no assumption was made that all goals would be fully achieved during the first year; the question was to what degree the organizations undergoing the training moved toward achievement of these goals.

---

[1] The program had been applied to several local educational systems prior to the application described in this report.

1. An agreed upon definition of the agency's mission.
2. Established continuing objectives and planning procedures for long-range achievement of the institution's mission.
3. Identified resources and constraints.
4. Differentiated between where the institution is going and where it wants to go.
5. Modified previously established objectives.
6. Identified and analyzed alternative courses of action.
7. Determined priorities.
8. Made strategic action assignments.
9. Defined standards of performance for key administrators.
10. Specified task completion dates.
11. Designed supplementary planning efforts.
12. Assigned responsibilities to subordinate units.
13. Designed a methodology by which future performance may be evaluated in relation to the performance specified in the plan.
14. Produced and are implementing a long-range strategic plan.[2]

The training can be differentiated into three program packages: (1) the American Management Association's "Management Course for Presidents", administered by the Presidents Association, Inc., which was founded by and is a part of the AMA, (2) the AMA's "Top Management Briefing", also handled by the Presidents Association, and (3) the "Educational Planning Process" administered and presented by the AMA's Center for Planning and Development. The target systems and staging of these programs are shown in the following chart.

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[2] American Management Association, "Feasibility and Pilot Programs Proposal: Adapting and Testing Business Management Development Programs for Educational Administrators". (Mimeo) (June 22, 1970), pp. 4-5.

Change Targets	Training Programs		
	Implemented 1st	Implemented 2nd	Implemented 3rd
	Management Course for Presidents	Top Management Briefing	Educational Planning Process
State Superintendent of Education	(1 person)	Phase I (24 people)	Phase I (12 people)
2nd level of Top Management in State Agency			
3rd level of Top Management in State Agency			Phase II (12 people)
Local School District #1		Phase II (24 people)	Phase III (12 people)
Local School District #2			Phase IV (12 people)

From the point of view of change strategy, this chart depicts the dictum change programs should start at the top and work downward in the organization. First priority was to be given to the chief of the organization (the State Superintendent) in order to secure support and involvement from the most powerful position in the organization. Initially, this was to be accomplished through attending the "Management Course for Presidents"; as the reader will notice, the participation of the Superintendent in the program is greater, in the sense of scheduled time, than any of the other positions in the organization.

The second priority was to involve the managerial levels immediately below the State Superintendent and two local educational agencies/superintendencies. This was to be accomplished by administering two "Top Management Briefings" to a total population of forty-eight people. The first included the State Superintendent and twenty-three of the top management personnel from the State Educational Agency; the second involved a separate briefing given to twenty-four people from the local school district level; this group was composed of two subgroups of twelve people from each of the pilot districts. Each of the subgroups was to contain the Superintendent of Schools in the District and eleven people he believed were most influential in the top administration in his School District.

The third change priority was to reinforce the involvement of key administrators and to focus on planning, the central point of the training, through the program called the "Educational Planning Process". For these purposes, four groups of twelve were formed. The first group was the State Superintendent and eleven of his immediate subordinates; the second group was twelve people in the State Educational Department who were most immediately involved in program services to the local educational agencies.

Consistent with the role the State Superintendent played in the first of these groups, the manager who was administratively responsible for the program services was designated the team leader of this second group.

The third and fourth groups were the teams of twelve people from each of the local educational agencies (LEA's).

Finally, one intern from each State was to be involved in the "Top Management Briefing" and then move to the AMA's center at Hamilton, New York for one year. The idea was that during this time he would develop a sophisticated knowledge of the AMA's planning process program so he would be able to serve as an "in-house" consultant to his organization when he returned. In addition, the interns were to serve a coordinating function between the AMA and the Experimental States as the program proceeded. Only one of the States, (Experimental State #1) sent an intern through this program.

Program Packages: Design and Content

For the purposes of this report, it is essential the character of the three different training efforts is presented and explained. By this we do not mean, who spoke, who did what, the eloquence of lectures, etc.; we assume the training programs were conducted by professionals and that the visual aids, hand-out materials, etc. were well designed and researched.[3]

What we are concerned about, as far as understanding the impact of the program on the training organizations, is the design of the programs and the substantive content. We will attempt to describe each of the three different general programs from these perspectives.

Four areas--(a) content, (b) per cent of time allocated, (c) learning format and (d) input control--will be used to develop a matrix to describe all three of the AMA's training programs.

---

[3] In short, even though the various training programs were observed by the person who did the field research and copies of all written materials were obtained from AMA, we do not feel it is appropriate for us to evaluate speaker's presentations or make judgments about the literature utilized.

Program #1: Management Course for Presidents

The "Management Course for Presidents" was a 4-1/2 day residential program conducted at the AMA Grove Training Center in Hamilton, New York, a training site which is located in the context of much natural beauty and a training facility which, among other things, is known for its "round table". This large circular table is the focal point for all training and is designed to provide maximum opportunity to be in visual contact with other trainees. The climate this setting evokes when a program is underway is roughly comparable to a board meeting of a large corporation. The number of participants is limited to the number who can set around the table, including the trainers (approximately 24).

This is a regularly scheduled program the AMA has conducted for several years. Twenty of these training sessions were to be offered around the country and the world during 1971. The program is oriented to the chief executives in organizations, and is what is known as a "stranger" training situation. Only rarely does more than one participant come from the same organization and only rarely do the participants know each other prior to the program.

In the past, it has been attended almost exclusively by members of the business community. Its express goal is ". . . to help the chief executive improve both his own and his organization's managerial effectiveness for the successful achievement of overall goals".[4] How this goal is expressed is depicted in a four dimensional matrix following:

---

[4] Taken from notebook material distributed at the program entitled, "An Introduction to the Presidents Association, Inc.".

Management Course for Presidents

Training Content	% of Program Time	Learning Format	Input Controlled by
(In order presented)			
#1- Management Theory & Practice - Management as a Profession - Principles of Management - Pattern of Management Action - Major skill of Management - Management Ethics	13.4	Lectures by AMA representatives Supplemented with visual aids Occasional didactic interaction with lecturer or other participants	AMA
#2- Communication - Leadership Communications	7.1		
#3- Planning - Setting Corp. Objectives - Strategic & Operational Planning	14.3		
#4- Organization Theory & Practice - Manager Manpower Planning - Organizing Management Team	13.4		
#5- Climate - Motivating Management Team - Climate for Growth of Top Management Personnel	12.5		
#6- Control - Controlling Management Team - Developing Managerial Standards of Performance - Implementing Concept of Professional Mgm't.	17.0		
#7- Leadership - Assuring a Dynamic Organization	7.1		
General Discussions: #1- Mgm't. Theory #2- Planning	12.5	Led by AMA representative; orientation: client to client reactions	Primarily AMA Secondarily by client
Small Group Discussion #1- Planning	2.7	Leaderless, task oriented groups. Client to client reactions	Shared Between AMA and Client

This matrix was developed on the basis of actual program time; coffee breaks, eating time, recreation and study time or non-program events designed solely for entertainment purposes were excluded from this analysis. The 1-1/4 hour time period at the beginning of the course which oriented people to the facility, staff and participants and gave a brief overview to the purposes of the course were also excluded. Given these exclusions, there is normally a total of twenty-eight hours of formal program time available during the 4-1/2 days.[5]

Implementation of Program with State Education Agencies

It was pointed out earlier that the personnel from the State Education Agencies expected to attend this particular program were the two State Superintendents of Education; this was to occur prior to the second stage of the training program, the "Top Management Briefing". Both of the State Superintendents were given the opportunity to participate in the "Management Course for Presidents" held in Hamilton, New York on September 29 - October 3, 1971.

Only one of the Superintendents--the Superintendent from what we shall call Experimental State #2--attended. The other Superintendent was unable to attend and did not return at a later date because the overall training program had progressed to such a point it made it inopportune.

It is important to note the role of these two Superintendents is defined differently by their respective State systems. The organizational position of the Superintendent that did participate is an appointed position within the civil service system of the State. The organizational position held by the Superintendent who could not attend is an elected office gained through statewide elections held every four years.

Since the monies allocated for the Superintendent of Experimental State #1 to undergo the "Management Course for Presidents" was not expended, it was reallocated and utilized to conduct a training program for local educational administrators. This training was administered after the completion of those parts of the original program which were related to the State Office of Education.

---

[5] The description in the text says nothing about non-programmatic time which is normally a highly important part of any residential training program; in this context people who seldom interact often do and much of the general interaction involves processing the training input: checking out other's perception of specific events and comments, etc. Since this set of conditions can be assumed to be present during any residential training, no comment about it was made. This is, in other words, a constant, albeit a very important one.

The intent behind this special effort was to extend the implications of the original AMA program by involving additional local level administrators; it was also assumed this would improve the possibility of coordinating and communicating the general orientation of the AMA project and give greater visability to program planning occurring within the State.

Program #2: Top Management Briefing

This 3-1/2 day residential training program was to provide a common or shared training experience which would be undertaken by approximately twenty-four personnel from the same organization who held co-terminus positions in the organization, saw each other frequently, were in some way interdependent with each other and, most frequently, represented the upper sectors of management.

The AMA offered the "Top Management Briefing" (hereafter TMB) at a training site near the focal organization but far enough away that the program can proceed without significant interruptions from the participant's offices. It is administered by two full-time employees of AMA; one person is responsible for coordination of facilities and other activities necessary to support the execution of the program; the second is responsible for the administration of the program (introducing speakers, acting as discussion leader, dealing with emergent problems, etc.). The training design is normally constructed in the AMA's New York City Headquarters.

Like the "Management Course for Presidents", the TMB has, in the past, been primarily applied to industrial organizations. The stated purposes are:

I. To increase the profitability of the organizations represented;
II. To present an overall concept of what management is, how it functions, and the techniques involved in its successful practice;
III. To explain management education, what is available, and to place particular emphasis upon PA's (Presidents Association) program.[6]

The manner in which these goals found their expression in the TMB program is depicted in the following matrix.

---

[6] Taken from material titled "Purpose of PA Management Briefing" and contained in the Presidents Association looseleaf binder given to all program participants. This particular document is found behind the tab, "Program".

Top Management Briefing

Training Content	% of Program Time	Learning Format	Input Controlled by
#1- Management Theory & Practice - Management as a Profession - Principles of Management - Pattern of Management Action - Major Skill of Management - Management Ethics	13.8	Lectures by AMA representatives Supplemented with visual aids Occasional didactic interaction with lecturer or other participants ↓	AMA ↓
#2- Planning - Strategic and Operational Planning	11.6		
#3- Organization Theory & Practice - Organizing the Mgmt. Team	10.5t		
#4- Climate - Assuring Dynamic Organization - Growth of Management Personnel	16.8		
#5- Control - Controlling the Mgmt. Team - Developing Managerial Standards of Performance	12.6		
#6- Training - Preview of Strategic Educational Planning Process (to be held in Hamilton, N.Y.)	2.1		
#7- Leadership - Styles of Leadership - Application of Mgmt. Principals to Education	12.6		
General Discussions: #1- Group Leaders Reports on "Organizing Mgmt. Team" #2- Summary & Conclusions: TMB #3- TMB Program Feedback	12.6	Led by AMA representative; orientation: client to client reactions	Primarily AMA Secondarily by client
Small Group Discussion #1- Organizing the Mgmt. Team	7.4	Leaderless, task oriented groups. Orientation: client to client reactions	Shared between AMA and client

General emphasis is similar to the "Management Course for Presidents", with the following exceptions: the subtopics entitled "Motivating the Management Team", "Manager Manpower Planning", "Setting Corporate Objectives" and "Implementing the Concept of Professional Management" are not contained in the "Top Management Briefing" outline, and the "Application of Management Principles to Education" is added. In comparision to the "Management Course for Presidents", which had twenty-eight hours of program time, the "Top Management Briefing" had 23-3/4 hours.

Implementation of the Program

Prior to the TMB programs, representatives from the AMA met with various members of the State Department of Education from each State to create understanding and coordination and to insure maximum receptivity of the training effort.

Implementation of the program occurred as planned. Experimental State #1 and Experimental State #2 both completed the two TMB's they were supposed to receive. Top management from the State Educational Office in Experimental State #1 underwent the program on September 14 - 17, 1971; the application of the program to the Local Education Agencies occurred October 21 - 24, 1971.

Training was given to the State Education Agency in Experimental State #2 on October 6 - 9, 1971 and to the local education agencies in that State on December 9 - 12, 1971.

Program #3: Educational Planning Process

Offered only at Hamilton, New York at the request of clients, this program, like the other two programs, also has had its widest application with industrial businesses. The program is residential in nature and runs for a total of two weeks. These two weeks are divided into one week training sessions with a minimum interval of four weeks between. This interval is built into the program in order to allow the trainees an opportunity to return to their organization, refine materials produced during the first week, discuss ideas and issues with others and do preparatory work for the second one-week session.

Based on their experience with business organizations, the AMA found that a number of issues in organizational planning are often either poorly conceived or misconceived with the effect of reducing the capacity of an organization to plan. For this reason, the AMA developed a program to define the steps in the planning process and the exact meaning of each. Considerable attention is given to the action implications of these definitions.

The "Educational Planning Process" rests on an explicit conceptual base which defines organizational planning as (1) a logical sequence of steps, each with (2) a rigorous and exact meaning and (3) a situationally appropriate allocation of time to each of the steps.

The program, in contrast to the "Management Course for Presidents" and the "Top Management Briefing", is designed to be strongly influenced by the input of participants. In other words, the precise content which will emerge in each of the conceptual areas or planning steps is largely a function of the organization receiving the training, the organizational issues it faces, the goals it is attempting to achieve, and the behavior of the administrators toward one another before, after, and during the training program.

Two additional variables play an important role in this training program: (1) the technological and physical characteristics of the training site and (2) the role of the AMA representative or trainer.

The training facility is unique; it contains a series of meeting rooms each with special technological apparatus and secretarial services designed to accelerate and facilitate the training program. Each main meeting room has a special slide projector system which contains a series of slides, each with specific definitions of a particular step in planning, content areas, examples of appropriate outcomes, etc., which can be projected on a screen by either the trainer or the trainees when difficulties are encountered. Large blackboards are available on a track system in which each can be pulled in front of the projection screen and used to record ideas and material; afterward, the blackboard can then be "sent" out of the room by pushing them along the track and, if necessary, recalled in a similar manner. Walls of the room are covered with a magnetic paint which allows sheets of butcher paper to be attached with magnetized vinyl strips. A refreshment bar is part of the support appratus; it is designed so that it can be stocked from outside, thus eliminating a potential disruption of the training.

A small one-way window exists in the back of each room; this window enables a secretary to look in on the training session and take notes from the material being produced by the participants; this material is typed as expeditiously as possible and a copy is always placed in front of each trainee's seat before he returns from the next break in the program.

The trainees sit behind a large semi-circular table (which can seat thirteen people) and faces the blackboard and projection screen area. At the end of this table is a console which controls the audio-visual equipment such as the projector and the lighting system.

The role of the AMA representative in this setting is different from the roles previously described. The trainer introduces and defines himself as a "resource person", whose role is to help the participants during the program. This means providing conceptual frameworks, intervening whenever terms or roles are defined imprecisely, calling for more precision, explaining and exemplifying the action implications of the various steps in the AMA's conceptualization of the planning process, and encouraging logical, rational exchanges between participants when conflict occurs. In other words, an important facet of the role of the AMA trainer during the program is to act as a "boundary maintainer", to insure that what goes on, how it is defined, and the procedures undertaken when working with each of the planning steps occurs in a manner consistent with AMA's objectives.

EXPLANATORY MATRIX

EDUCATIONAL PLANNING PROCESS

Educational Planning Process

	Training Content[7]	% of Time Allotted	Learning Format	Input Controlled by
FIRST TRAINING SESSION	#1- Mission - Organizations function - Justification for Continued Societal Support - Focus for Resources to be Applied #2- Internal Analysis - Nature of Institution - Capability & Limitations - Factors under Institutional Control - Organization - Beliefs - Characteristics - Functions - Resources - Strengths - Weaknesses #3- External Analysis - Factors Outside the Control of the Organization (i.e. external constraints) - Trends - Rate of Change - Kind of Change - Assumptions About Future #4- Objectives - Desired Results or Ends - Quantitative Terms - Specify Means for Evaluation - Short, Long Range or Continued Objectives	Variable and situational, depending upon problems. All areas to be covered as completely as possible by end of week. ↓	Parameters of learning process, steps and procedures defined by AMA. Client learning to occur through interpersonal interaction--client to client and client to AMA resource person. All learning outcomes are the respon-	AMA and client (Discussion of boundries and depth largely controlled by AMA representative; specific problems, documents, organizational contexts, and organizational processes defined by client.) ↓

	- Differentiation of Ends from Means #5- Intersession Assignments - Data Necessary to Development of Strategies to Accomplish Each Objective - Historical Perform. Data - Cost Data for Cost/Benefit Analysis of Alternatives - Data Necessary for Organizational Evaluation	↓	sibility of the client (not AMA). ↓	↓
Intersession Break: Return to Organization for Minimum of four weeks				
SECOND TRAINING PROGRAM	#6- Priorities - Priority Ranking of Objectives Based on Team Evaluation of Resource Allocation - Sense of Urgency - Cost of Implementation - Probability of Success - Long-term vs. Short-term Benefit - Public Demands #7- Strategies - Means to Achieve Results Specified in Objectives - Development of Alternatives - Cost/Benefit Analysis Before Strategy Decision #8- Programs - Specific Results - Delegation to a Person - Acceptable Target Date (mutually agreed) - Sum of all Programs Equal to Results Anticipated in Specific Objectives #9- Planning Schedule - Schedule of Events & Target Dates - Insure Planning is "Way of Life"	↓	↓	↓

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[7] This chart was developed from two sources: materials distributed at the training program and the notes of one of the researchers who observed several of the programs.

Implementation of the Program

Of the three different training programs, this was by far most complex in its implementation. The reader will recall that the "Educational Planning Process" was to be provided to four groups of twelve people from each State. The first of these was to be the State Superintendent and eleven of his subordinates; the second was to be twelve people from the top administration of the State who were most immediately involved in program services to the local educational agencies.[8]

The third and fourth groups were to be teams of twelve, each from a pilot, local educational agency. The last groups were to include the local district Superintendent and eleven people he considered most influential in the administration of his organization.

Since this is the most complex program to execute, we will divide our presentation into two sections and detail what happened in each of the experimental states.

Implementation in Experimental State #1

The first group to undergo the training was the State Superintendent, ten subordinates, and one member of the State Board of Education. The Board member only attended the first week of the program and was replaced by an administrator from within the State agency when the second session of training occurred. The second group from the State Office of Education was composed of the person responsible for local educational agencies who acted as team leader during the training, two organizational peers who along with the Director of Program Services had attended the first of "Educational Planning Process" programs, and thirteen subordinates--for a total of sixteen people in this second group. Three of these people had completed the program previously and were undergoing it for the second time.

The third and fourth groups were from the local education agencies. The third group was composed of the Superintendent of Schools, twelve subordinates and a representative from the State Office whose role is to encourage management development training in all local agencies; in this regard, he acts as a representative of the State Superintendent. The fourth group was composed in a similar way.

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[8] Precisely how this group would be identified was not clear in either the original training or during the early part of the implementation of the program. This had the effect of causing some disappointment among several participants who attended the TMB and expected to participate in the "Educational Planning Process" but were excluded from the program because they were not directly involved in program service to the local level of education.

Experimental State #1

Group	From	Training Dates[9]
#1	State Department of Education	Session 1 - October 12 - 16, 1970 Session 2 - December 14 - 18, 1970
#2	State Department of Education	Session 1 - January 18 - 22, 1971 Session 2 - March 1 - 5, 1971
#3	Local Education Agency	Session 1 - March 22 - 26, 1971 Session 2 - May 10 - 14, 1971
#4	Local Education Agency	Session 1 - April 5 - 9, 1971 Session 2 - June 14 - 18, 1971

Implementation in Experimental State #2

Sequencing of the training program in Experimental State #2 occurred in a different manner. Experimental State #2 began the training process after Experimental State #1, and in the first application of the program to the first group from this State (composed of the State Superintendent and thirteen of his subordinates) a decision was made to expand the length of the training effort; both the AMA and the participants agreed there was a need for more time to complete the steps in the training. This decision was also consistent with the general intent of the AMA which was to build understanding at the top of the system before proceeding to lower levels. Three one week sessions were given with an interval of seven weeks between the first and second session and an interval of four weeks between the second and third.

The second group from the State Education Agency was composed of the administrator responsible for program services to local education, who acted as team leader, and five of his subordinates. (Both the team leader and these subordinates had undergone the first "Educational Planning Process" program administered to this State.) Seven subordinates of one of the five team leader's subordinates also attended the program. A total of thirteen people underwent the second program. Normally, this group would have had two one week sessions but due to the modifications made in relation to the first training group and the fact fifty percent of the people had had the program before, this training session lasted only one week.

Like Experimental State #1, the third and fourth groups in this State were from the local educational agencies. The third group was composed of the local Superintendent and ten subordinates. The fourth group was composed of the local Superintendent, ten subordinates and the President of the local board of education. Neither the Superintendent nor the President of the School Board attended the first week of training due to extenuating circumstances. No representatives from the State Education Agency comparable to the person in State #1 participated in either of these training programs.

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[9] From AMA correspondence with research team, letter from Mary Hill, dated September 10, 1971.

Experimental State #2

Group	From	Training Dates[10]
#1	State Department of Education	Session 1 - November 9 - 13, 1970 Session 2 - January 4 - 8, 1971 Session 3 - February 8 - 12, 1971
#2	State Department of Ecuation	Session 1 - March 8 - 12, 1971
#3	Local Education Agency	Session 1 - March 29 - April 2, 1971 Session 2 - May 24 - 28, 1971
#4	Local Education Agency	Session 1 - April 19 - 23, 1971 Session 2 - June 21 - 25, 1971

Summary

At the local level in each of the two States the implementation of the program went as AMA anticipated. The program also followed expectations with regard to the first and second administrative groups from the State Office of Experimental State #1. In the case of Experimental State #2, the first group went through three weeks of training rather than the anticipated two, and the second group went through one week of training rather than the expected two week program. Overlap in attendance between the first and the second group was approximately fifty percent.

Experimental State #1 had an approximate overlap of twenty percent between the first and second groups and their phase II program ran for two weeks. Thus, although the way the training was given to each State varied, the total amount of time top administrators were exposed to the program was fairly comparable.

Finally, there was considerable continuity between the number of people from the State Offices in both States that attended both the "Top Management Briefing" and the "Educational Planning Process".[11] Out of twenty-six people who attended the TMB in State #1, twenty went through the "Planning Process", a continuity of seventy-seven percent. In State #2, fifteen of the people from the State level who attended the TMB attended the "Planning Process", a continuity of sixty-three percent. Virtually one hundred percent continuity was achieved at the Local Educational Agency level in each State.

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[10] From correspondence with researchers, op. cit.

[11] The data which follows was developed from the AMA's Program rosters.

Research Methods

Development of the Research Design

Research design is a key factor, perhaps the key factor, in assessing the effects of any program. Design affects the degree to which data can be unambiguously interpreted; that is, it controls against the possibility of multiple explanations of research findings. In this section, we will describe the initial research proposal and the modified version which became the basis for this training evaluation. The intention is to elucidate the strengths and weaknesses of the research design so the reader will have a clear understanding of its effects on the interpretation of evaluation findings.

Provisional Design: Problems and Prospects

When the research team first began to explore AMA's thinking about the evaluation study, it became clear the only explicit assumption which had been made was that "before and after" data would be gathered from the two State Education Offices that had committed themselves to undergoing the training program. On the basis of this set of data, conclusions about the effects of the program were to be made.

> The general concept for evaluation of almost any learning experience is fairly straightforward; its application is more complex. Basically, our approach is to conduct "before and after" evaluation studies.[1]

The report from which this comment was taken does not mention control groups or comparison groups but speaks primarily about techniques of measurement and appropriate areas for measurement. From the standpoint of research design, serious problems lay ahead if this path were traveled. These problems can be summarized by saying the design would be, for all practical purposes, a "One-Group Pre-test-Post-test Design"--duplicated in two organizations. Data gathered within this particular type of design is susceptible to a multiplicity of rival explanations.[2] In other words, if this design were used, a number of interpretations of the research findings, each with equal or undeniable plausibility, could be made; no satisfactory resolution of which was the more meaningful interpretation would be possible.

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[1] Treadway C. Parker, "Suggestions Concerning Evaluation of the AMA/USOE Training Project" (Hamilton, New York: AMA; August 6, 1970).

[2] Donald Campbell and Julian Stanley, Experimental and Quasi-Experimental Designs for Research (Chicago: Rand McNally & Co., 1966), pp. 9-12.

For several reasons--the widespread utilization of this design in training evaluations,[3] the inherent limitations of this design and the effect modification of it had on this particular evaluation effort,--it is important the consequences of utilizing a "One-Group Pre-test-Post-test Design" are portrayed clearly. To begin this analysis, it is necessary to have a set of symbols which can be used to portray the basic parameters of a research design. In the analysis which follows, we shall rely on the work of Campbell and Stanley.[4] The symbols they use are:

X = experimental or treatment variable
O = observation, data gathering at a specific point of time
R at the end of a row = random selection of the sample population.
Series of dashes (----) between rows = a non-random selection of the population was used.

Any X's or O's in a given row indicate the application of these variables to the same population. Moving from left to right represents movement in time from a beginning point to an ending point. Vertical alignments of these symbols indicate that the events, either X or O occurred at the same time in different populations. Thus the design which was proposed, the "One-Group Pre-test-Post-test Design"--duplicated in two organizations, can be symbolized in the following manner:

	Fall, 1970		Spring, 1971
Experiment #1	O	X	O
Experiment #2	O	X	O

The above symbolization reflects the fact that data (O) is to be gathered from an organization prior to the introduction of a new program (X) and then gathered after the program is over. This process is repeated in both organizations. There is no control group; this is reflected by the absence of a row without an "X". Both the observations (O) and programs (X) occur simultaneously in each of the organizations. Lack of a series of dashes between rows or an "R" at the end, indicates that no comparison is to be made between groups.

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[3] Marvin Dunnette and John Campbell, "Laboratory Education: Impact of People and Organizations," Industrial Relations, American Psychologist, VIII (October, 1968), pp. 1-27.

[4] Campbell and Stanley, p. 6.

One fact this design reflects is the practical reality of selecting treatment groups on some basis other than random selection and, consequently, reducing the possibility of optimum generalizability of treatment effects to the larger universe of similar social units, in this case the universe of State Educational Systems. This is not intended to be a criticism of the actual choice process used in this program; it is simply an acceptance and acknowledgment of the consequences of not selecting the study populations on a random basis. This problem is by no means unique to this particular evaluation but is characteristic of most field studies[5] of the effects of training in an on-going organizational setting. Selection is, however, only one of a number of factors which affect the power of a research design.

Campbell and Stanley have identified fifteen factors which, if not controlled by the research design, can have deleterious effects on the validity of research findings. They call these factors "threats to validity" and distinguish two general types--Internal and External. Internal threats to validity are those which can effect the interpretation of research findings.

The nine considerations which relate to internal validity are:

Internal Validity Factors[6]

1. History: events, other than the experimental treatment, occurring between pre-test and post-test and thus providing alternate explanations of events.

2. Maturation: processes within the respondents or observed social units producing changes as a function of the passage of time per se, such as growth, fatigue, secular trends etc.

3. Instability: unreliability of measures, fluctuations in sampling persons or components, autonomous instability of repeated or "equivalent" measures. (This is the only threat to which statistical tests of significance are relevant.)

4. Testing: the effect of taking a test upon the scores of a second testing. The effect of publication of a social indicator upon subsequent reading of that indicator.

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[5] W. Richard Scott, "Field Methods in the Study of Organizations", Handbook of Organizations. Edited by James G. March (Chicago: Rand McNally, 1965) pp. 261-303.

[6] Donald Campbell, "Reforms as Experiments", American Psychologist, XXIV (April, 1969) p. 411. This article contains an expansion of the list of variables in Stanley & Campbell, op. cit.

5. Instrumentation: in which changes in the calibration of a measuring instrument or changes in the observers or scores used may produce changes in the obtained measures.

6. Regression artifacts: pseudo-shifts occurring when persons or treatment units have been selected upon the basis of their extreme scores.

7. Selection: biases resulting from differential recruitment of comparison groups, producing different mean levels on the measure of effects.

8. Experimental mortality: the differential loss of respondents from comparison groups.

9. Selection-maturation interaction: selection biases resulting in differential rates of "maturation" or autonomous change.

Variables related to external validity may have a bearing on the processes explored during an experiment but they do not directly affect the interpretation of the research results; the major consequence of not controlling for these variables is to dramatically reduce or even make impossible the extension of findings to other contexts.

External Validity Factors[7]

1. Interaction effects of testing: the effect of a pre-test in increasing or decreasing the respondent's sensitivity or responsiveness to the experimental variable, thus making the results obtained for pre-tested population unrepresentative of the effects of the experimental variable for the unpretested universe from which the experimental respondents were selected.

2. Interaction of selection and experimental treatment: unrepresentative responsiveness of the treated population.

3. Reactive effects of experimental arrangements: "artificiality", conditions making the experimental setting atypical of conditions of regular application of the treatment: "Hawthorne Effects".

4. Multiple-treatment interference: where multiple treatments are jointly applied, producing effects atypical of the separate application of the treatments.

5. Irrelevant responsiveness of measures: all measures are complex, and all include irrelevant components that may produce apparent effects.

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[7] Campbell, p. 411.

6. Irrelevant replicability of the treatments: treatments are complex and replications of them may fail to include those components actually responsible for the effects.

Taken together, these fifteen variables constitute "State of the Art" thinking about research design in the social sciences. Since we are reporting the effect of training in a field study or quasi-experimental situation in which it will not be possible to assume in any rigorous way that the findings have generalizability, we shall restrict ourselves to consideration of the nine threats to internal validity detailed above and show how these threats are or are not controlled for by both the preliminary and actual research design employed in this evaluation efforts.

One additional step needs to be taken prior to this analysis and that is to indicate what kinds of strategies are relevant to controlling or reducing the impact of these threats to meaningful interpretation of research data. In this area, we are largely on our own; we know of no document available to illuminate this problem. On the other hand, there are a series of strategies implicit in the work of Campbell and Stanley which we shall attempt to make explicit.

According to our analysis, the nine threats to internal validity can be grouped into three areas: (1) factors affected by the presence of control groups; (2) factors affected by the manner in which the measurement process is handled, and (3) a factor which cuts across both of the former areas.

Strategies for Minimizing Threats to Validity

Conditions Related to Presence or Absence of Control Groups

Threats	Reduced by:
1. History	Addition of one or more control or non-treated groups, preferably selected on a random basis. and/or utilization of data collected over an extended period of time. If only the latter strategy is used, it is critical that the measurement process by which the data was generated remained the same. (Cf. analysis of threat #5 below.)
2. Maturation	Addition of one or more control groups, preferably selected on a random basis.
4. Testing	Addition of at least one control group which is not pre-tested, assuming both the experimental and control group are selected randomly or

Threats	Reduced by:
	addition of at least two control groups-one is pre- and post-tested, the second is post-tested only. (Assuming random selection processes, differences between the first and second control group is related to testing.)
6. Regression Artifacts	Avoidance of the use of groups which are extreme, either high or low, in relation to the general population as determined by some measurement device.
7. Selection and 9. Selection-Maturation Interaction	Random selection of study group(s) plus examination of recruitment, selection and turnover figures in the case of groups which have existed over-time prior to the experiment.

Conditions Related to the Measurement Process

Threats	Reduced By:
3. Instability	(Assuming the presence of at least one control group.) Statistical analysis and probability theory plus careful design of measurement factors.
5. Instrumentation	(Assuming the presence of at least one control group.) Not modifying measurement instrument during the study and thorough analysis of comparability of "comparable" or "equivalent" measurement methods, if these are to be utilized.

General Condition

Threat	Reduced by:
8. Experimental Mortality	Random selection process if group(s) is(are) to be temporary plus (in the case of non-temporary groups) careful pre- and post-analysis of mortality rates in the population studied.

Each of these strategies represents a way in which threats to internal validity can be reduced or minimized; lacking the utilization of the appropriate strategy, the threat to validity is given full play. Such a situation would permit the possibility of explaining away the apparent effect of any experiment by raising fundamentally unchallengable arguments that the effects were a function of another variable rather than of the treatment or experimental situation. Thus, it is appropriate to ask what strategies for controlling threats to internal validity were present in the original research design.

The answer is virtually none. Without at least one control group which would not receive the experimental treatment, there is no way to refute a rigorous argument that "apparent" effects have nothing to do with the application of the training program but are due to history, maturation, testing, regression artifacts, selection, or selection-maturation interaction. In essence this problem would exist because of no baseline (i.e., a non-treated group) which would allow comparative assessment of what kinds or degrees of change could be clearly attributed to the training program. Without a control group, the threats of Instability and Instrumentation are, being as generous as possible, questionable; that is, there would be no way of having confidence either of these were not playing a role in producing apparent treatment effects. Finally, since the two groups undergoing training were not selected on a random basis, the potential threat of experimental mortality could not be minimized and could create difficulties in data interpretation. It should be noted that even under optimal conditions, this particular threat is extremely difficult to control. Theoretically it is not only a potential function of selection processes, but also is a function of the impact of the experiment on the participants. Given these considerations, a generous view would be that it would be questionable whether or not this threat would be controlled.[8]

In short, the control effects of this design are:

History	Maturation	Testing	Regression Artifacts	Selection	Selection-Maturation Interaction	Instability	Instrumentation	Experimental Mortality
-	-	-	-	-	-	?	?	?

Note: Dash (-) = no control

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[8] Stanley and Campbell, Op. Cit., pp. 7-13, argue, assuming random selection of the group, that selection and mortality can be controlled by this design. Since this was not the nature of the selection process we believe it is questionable these problems would be controlled.

Final Design: Problems and Prospects

Because of these considerations, a control group was added to the sample populations. At first, we intended to add two control groups-one which would be pre-tested and post-tested and one which would be post-tested only. Because neither the experimental groups nor the control group(s) were to be selected on a random basis, it was decided that the potential payoff from including two control groups would not be worth the additional time and effort. Therefore, only one pre-tested and post-tested control group was used.

Selection factors which were the basis of choosing the two experimental States were not made clear to the research team beyond the fact that these two organizations contained people in key administrative positions who were friendly toward AMA, knew representatives of AMA, and believed the program would help their organizations function more effectively. The two experimental States could, therefore, be called "seekers".

The inclusion of the control State was accomplished by interviewing top administrators of the experimental States and asking for recommendations as to what two States would be most comparable to the two experimental States. Three States were nominated; the one which received the most consensual rating was chosen. When the top administrator of the potential control State was contacted, he agreed to let his State be the control group and, as part of the rationale for accepting this role, stated that by participating in this manner he hoped his State would be more likely to receive similar training should the program be expanded in the future.

Thus, all three of the groups--the two experimental groups and the one control group--can be characterized as "seekers", an orientation which may or may not be widespread among State Education Departments. The "Nonequivalent Control Group Design"--applied to two experimental situations--which grew out of these circumstances is depicted below.

	Fall, 1970		Spring, 1971
[9]Experiment #1	0	X	0
	----------	----------	----------
	0		0

	Fall, 1970		Spring, 1971
[9]Experiment #2	0	X	0
	----------	----------	----------
	0		0

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[9] The bottom row in each case represents the same control group.

This set of conditions approximates, with the exception of the lack of random selection methods, a true experimental design which effectively controls for all of the threats to internal validity. Absence of random selection does, however, make significant differences between the above design and an experimental design. This difference is essentially centered around the problem of matched groups versus randomly selected groups. Since random selection is the only known way to gain assurance biasing differences between the groups are minimized, it is problematic that matched groups will in fact be "matched", i.e., alike. The analysis of the selection variable is very important and the only way to assess the degree to which the study groups are comparable is through scores on the pre-test. The greater the similarity of scores the more thoroughly the threats of selection and history, maturation, testing, instrumentation and instability are controlled. In other words, ...

> The difference for the experimental group between pre-test and post-test (if greater than that for the control group) cannot be explained by main effects of these variables such as would be found affecting both the experimental and control group.[10]

The variable of selection-maturation interaction is less than clearly controlled by this research design even though pre-test scores may indicate comparability prior to the introduction of the experimental program; this comparability may be a temporary correspondence when in fact the rate of maturation is different in the study populations. So, the extent to which this threat is controlled by the research design is questionable. The factor of regression artifacts is also controlled in a questionable manner.

> If. . . the means of the groups are substantially different (in terms of the pre-test), then the process of matching not only fials to provide the intended equation but in addition insures the occurrence of unwanted regression effects. It becomes predictably certain that the two groups will differ on their post-test scores altogether independently of any effects of X, and that this difference will vary directly with the difference between the total populations from which the selection was made and inversely with the test-retest correlation.[11]

Finally, it is possible to effect control over the variable of mortality through an examination of the extent to which differential mortality occurred between the experimental and control groups when the post-test data was gathered.

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[10] Campbell and Stanley, pg. 48.

[11] Campbell and Stanley, p. 49.

To summarize, the control effects of this design are:

History	Maturation	Testing	Regression Artifacts	Selection	Selection-Maturation Interaction	Instability	Instrumentation	Experimental
+	+	+	?	+	?	+	+	+

Note: Plus (+) = control over the threat to validity

This design clearly exercises control over all of the threats to unambiguous interpretation of the effects of the training program with the exception of (A) regression artifacts, (B) selection-maturation interaction and, (C) possibly, the selection factor.

Finally it should be noted we are taking a conservative posture toward research methodology; we have called this research design a "Non-equivalent Control Group Design" applied to two experimental situations. In short, we believe a more rewarding interpretation of the effects of the training program can be made by viewing the two experimental training programs separate and distinct from each other. The effects of each program would then be assessed in relation to the control group which did not receive the program.[12] This posture enables us to avoid a number of tenuous assumptions about the extent to which the two experimental units were in fact comparable and reduces the problem to the question of comparability between each experimental group and the control group. By proceeding in this manner, differences in impact of the training program should be more readily discernable and the overall effect of the training should be more easily identified.

Research Methodology within the Research Design

The fundamental problem was to define what was to be evaluated and how. Documents obtained from the American Management Association suggested a number of possibilities. The original research proposal stated that the evaluation effort was to measure the achievement of the programs objectives (noted on p. of this report) and "the degree of planning's introduction and implementation into the individual school systems".[13]

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[12] With one exception which is explained on p.48 of this section.

[13] AMA, "Feasibility and Pilot Programs Proposal", p. 12.

> Specifically, the evaluators will attempt to (1) measure the results of the briefings and pilot programs as teaching/learning methodologies to introduce planning as a basic management tool into educational systems. The evaluation should also (2) weigh the effectiveness of the planning process as an educational device, (3) the quality of instructional materials and methods, (4) the character of the statistical and other input material supporting the planning process, and (5) the significance of decisions resulting or forthcoming as a direct result of the combination of briefings and planning processes.[14, 15]

A second document from AMA proposed that the focus of the evaluation effort should be.

> To find out if the learning experiences which make up the program have been effective. Effectiveness should be defined in terms of improved management and planning practices within the organizations trained. Improvement implies change in a positive direction so the evaluation will attempt to measure change.[16]

The proposal goes on to say. . .

> The variables to be measured probably fall into three general categories: attitudes, knowledge and job behavior. The attitudes of most interest to us are those which pertain to management and planning. How do these people feel about the concepts of management and planning? The knowledge of most interest to us also is concerned with management and planning. The basic question is--what do the people know about management and planning? The job behavior to be measured is concerned with management and planning actions. The basic question here is--what do people do differently after the training than before?[17]

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[14] AMA, "Feasibility and Pilot Programs Proposal", p. 12

[15] Emphasis added through underlining and numbering of items.

[16] Treadway Parker, "Suggestions Concerning Evaluation of the AMA/USOE Training Project" (Hamilton, New York: AMA; August 6,1970) p. 5.

[17] Parker, p. 5-6. Emphasis in original text.

And the author suggests that these areas be measured through questionnaires, interviews, observation, and organizational documents.

One circumstance which it seemed desirable to avoid was the practice of assessing the effectiveness by collecting data at the site of the training immediately before and after the program. The likelihood that data of this nature would have any significance to actual behavior on the job is quite low.[18] The critical test is as Katz and Kahn[19] have suggested: What kinds of change occur in the organizational setting? Any attempt to answer this question must have as its focus the organizational context in which the trainees act out their organizational behavior; in this milieu, many of the determinants of organizational behavior, which are absent in off-site training situations, have full sway. The role sets, group and organizational norms, constraints which grow out of the absence or presence of technology, and the influence of the organizational environment are the force field against which training efforts are ultimately applied. If the training effort is to have the effect of changing patterns of behavior in the organization, this set of factors must, in some way, change.

Linking Program with Potential Organizational Impact

The problem from a methodological standpoint is to establish a conceptual linkage between the training and the on-going organizational system. This linkage is fundamentally dependent upon the type of training program and the way the program is implemented. Type of training is defined by the composition of the training group and, in turn, the composition of the group determines the impact the program can have on organizational behavior. The latter consideration is keyed to the goals and types of change which can realistically be expected to occur from the training. In this context, goals of change means the broadest target system that can be affected by the training and type of change means the outcome or effect. A typology[20] which characterizes five different types of training is presented in the following chart.

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[18] Dunnett and Campbell, Op. Cit. Even though the type of training examined by Dunnett and Campbell is different from what occurred in the AMA's training effort, the methodological criticisms they levy and the support they have, as evidenced by the research findings reviewed, are relevant to this problem.

[19] Daniel Katz and Robert Kahn, The Social Psychology of Organizations (New York: John Wiley, 1966), pp. 390-91. Katz and Kahn call the assumption that training changes will produce direct organizational change, the psychological fallacy. Their critique of strategies of change and assumed potential organizational effects is thorough and sophisticated.

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[20] The titles to categories 1-4--stranger, cousin, diagonal and family or functional--and their definitions were adapted from: Warren Bennis, Changing Organizations (New York: McGraw-Hill, 1966), pp. 120-121.
The two categories, goals and types of change, were not taken from this source but were developed by the research team.

TYPES OF OFF-SITE

Composition of Training Group	
1. Stranger Programs:	Executives from organizations attend. . . as 'delegates' representing their organizations."
2. Cousin Programs:	"For individuals with similar organizational ranks but from different functional groups, e.g., all first-line supervisors or all general foremen."
3. Diagonal Programs:	"Composed of members from the same company but of different ranks and from different departments. No man is in the same group with anyone from his own work group."
4. Family or Functional Group Programs:	"These groups are identical to the intact group as indicated by the formal organization; e.g., a particular supervisor would be with his work group."
5. Inter-Department Programs:	Two groups of organizational members; each group composed of selected (most influential or powerful) members from the particular organizational unit.[21]

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[21] Program #5 was drawn and adapted from: Jack Fordyce and Raymond Weil, Managing With People (Reading, Massachusetts: Addison-Wesley, 1971), pp. 124-30.

ORGANIZATIONAL TRAINING

Program Goals of Change*	Type of Change*
Primary: Individual Secondary: -- Tertiary: ?	Primary: Individual awareness/knowledge Secondary: ? Tertiary: ?
Primary: Individual Secondary: -- Tertiary: Intra-department relations	Primary: Individual awareness/knowledge Secondary: -- Tertiary: Inter-personal expectations of role relations and group standards
Primary: Individual Secondary: Inter-department relations Tertiary: Intra-department relations	Primary: Individual awareness/knowledge Secondary: Inter-group standards of appropriate relationships Tertiary: Inter-personal expectations about role relations and group standards
Primary: Intra-department relations Secondary: Individual Tertiary: inter-department relations	Primary: Interpersonal expectations of role relationships and group standards Secondary: Individual awareness/knowledge Tertiary: Inter-group standards of appropriate relationships
Primary: Inter-department relations Secondary: Intra-department relations Tertiary: Individual	Primary: Inter-group standards appropriate relationships Secondary: Inter-personal expectations of role relationships and group standards. Tertiary: Individual awareness/knowledge

*a dash (--) = unknown
a question mark (?) = competing possibilities

The second variable involved in the linkage between training and on-going organizational behavior is the way the training program is implemented. Each of the five types of training programs identified in the chart can be implemented in a different ways and, accordingly, could have different degrees of impact on the force field in the target organization. These differences in approach have their roots in beliefs about how trainee attitudes can be changed and in the kinds of professional skills the trainers possess.

In general, attitude change can occur through three different processes--compliance, identification, and internalization.[22]

Change through compliance is essentially learning to say or do the expected thing in special social or organizational situations, regardless of what the individual's private beliefs may be. Change through identification (unlike compliance in which the individual does not privately accept the attitude) is accepted both privately and publicly and is evoked when the individual is acting within the relationship upon which the identification is based. Both compliance and identification are tied to external sources and depend upon social support. Change through internalization involves accepting influence from an outside source because the nature of the influence is congruent with the persons value system, useful in the solution of a personally meaningful problem, etc. In other words, change occurs because it enables the person to better realize his personal values; this change is integrated into the person's value system.

In the case of both compliance and identification, change remains isolated from the person's basic value system and is not integrated.

To summarize, we have developed a typology of types of training programs and presented three kinds of attitudinal changes that can occur as a consequence of training. We are now in a position to relate the programs developed by the AMA to this conceptualization and indicate the impact areas.

The two programs which are readily classified by the typology are the "Management Course for Presidents" and the "Educational Planning Process". The first of these was clearly a Stranger Program; there was no reason to believe any of the participants knew each other before the training session, came from the same organization, or would return to the same organization. The "Educational Planning Process" was designed to be a Family Program in that the organizational leader and his subordinates defined the composition of the program participants. The third program, "Top Management Briefing", is somewhat more difficult to classify; basically it was what we have called a Diagonal Program in the typology but there were deviations from the exact definition of this type of program. These deviations were that in several instances a subordinate and superior from the same department were present; however, they were not there because of this relationship but because they represented different functional units in the organization. With only modest reservation, we will call this (the TMB) a Diagonal Program.

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[22] These concepts and their description are drawn from: Herbert C. Kelman, "Processes of Opinion Change", Public Opinion Quarterly, XXV (Spring, 1961), pp. 57-78.

Change Emphasis of AMA Program			
	Individual Awareness Knowledge	Inter-Personal Expectations of Role Relations & Group Standards	Inter-group Standards of Appropriate Relationships
Stranger Program: Management Course for Presidents	Primary		
Diagonal Program: Top Management Briefing	Primary	Tertiary	Secondary
Family Program: Educational Planning Process	Secondary	Primary	Tertiary

We are using the term "emphasis" in this chart to mean the area of potential organizational impact and have drawn the primary, secondary, and tertiary categories from the typology, under the heading "Type of Change". The three column headings represent the areas of organizational behavior which are the linkage between (1) the design of the training program and (2) change in the organization. In other words, the design of a stranger program is such that all bets for organizational change are placed on the capacity of a single trainee to return to an organization and change it. In the case of diagonal programs, the odds for organizational change are placed primarily on the capacity of individuals to return to the organization and effect changes based on new knowledge and awareness. And, in addition, the design of this program allows one to gamble, with somewhat lower odds, that the program will have had an impact on inter-group standards of appropriate relationships between departments or work units. At a still lower level of likelihood, it is also possible the program can have an impact on role relationships and group standards of behavior.

Family programs, by their very design, promote the greatest possibility of change in the two interrelated areas: (1) interpersonal expectations about role relationships and (2) the group standards of behavior. Any changes which flow from the training are occurring in the most important formal relationships individuals have in the organization. The second and less heavily impacted area is individual awareness and knowledge. The third and least affected area is inter-departmental relationships, although, this can be an outcome of this training design: assuming the organization is a system where one work unit is inter-dependent with others, changes in one of the units will effect changes in relationships with other immediate organizational units.

Potential Areas of Change

Lastly, the potential change effect of any of these programs must be considered in relation to the number of people who are exposed to each type. In the case of the change strategy pursued by the AMA, the first organizational intervention was a stranger program given to the State Superintendent of Education; this was followed by two diagonal programs, the "Top Management Briefings"; one was given to twenty-four people from the State Educational Agency and a second was given to twenty-four people and was composed of two groups of twelve people from each of the two local educational agencies serving as pilot experiments. The family programs, the "Educational Planning Process", was given to two groups of twelve from the State Office, and two groups from the experimental local educational agencies.

If the type of training program and its likelihood of organizational impact is related to the number of people who were trained, it becomes clear that the greatest change emphasis in the AMA program rests in the area of individual awareness/knowledge. The second most emphasized area of impact is inter-personal expectations about role relationships and group standards.

These are the linkages between the program and potential organization change. This is not to be confused with the content of the training program. In other words, regardless of the content of the training program it would, because of the design of the program, have to be translated through the linkages we indicated before it could have the effect of changing the organization.[23] The methodological problem was therefore reduced to a problem of measuring (1) change in individual awareness/knowledge and (2) change in inter-personal expectations of role relationships and group standards; measurement of these areas would have to be related to the goals of the training in order to assess the impact of the program.

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[23] It is common practice to blurr or confuse the distinction between the content of a training program and the change potential. These are distinctly different matters. Change potential is a question of training design and concepts presented. The powerful effect design has on outcomes is often far understated and exaggerated emphasis is given to content domains. In short, what we are calling for is a balanced awareness of both sides of this equation, rather than one or the other.

Measurement of the Effects of Training

In order to explore these two areas, it was decided to gather data through three techniques: structured questionnaires, semi-structured interviews and observation of the training.[24]

Questionnaires were chosen because this technique produces a large amount of data through a relatively short period of intervention in the organization's processes and because it produces data which lends itself to analysis with a minimum of preparatory time and effort.

Relative to questionnaires, semi-structured interviews involve a much greater time investment from both the researcher and the respondent and present formidable tasks[25] which much be surmounted before the data can be subjected to analysis.

Nevertheless, semi-structured interviews were chosen as the second data gathering technique for one specific and very important reason; this methodology enables the respondent to describe circumstances and events with a minimal amount of definitional structure provided by the researcher. Theoretically, material produced through this method will be more "reality oriented"; more as the interviewee sees and defines things. There is also reason to believe that data gathered through this technique will be more conservative, i.e., less likely to show training effects and that when effects are produced they are more likely to be of meaning and value to the respondent and, hence, the organization.

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[24] Given the limitations of funds, preparatory planning time, and the time the members of the research team (which is, incidentally, composed of two people) could allocate over the period of the project, the study would, of necessity, not approximate a comprehensive assessment of program effects.

The person who conducted the field research attended all the "Top Management Briefings", the "Management Course for Presidents", selected parts of the programs on the "Educational Planning Process," collected on-site data from the two experimental organizations and the control organization both before and after the program. In each State each of the on-site visits involved one week with the State Education Department and three days with one of the Local Educational Agencies.

[25] Analysis of interview data normally involves the development of a form of content analysis which provides a way of transforming the interviewee's responses into a format which is similar to the material provided from a questionnaire--intensities of expression to specific research categories--and entails the development of a training process for the persons who are to code the interview material. The latter is necessary in order to provide inter-coder reliability when the interviews are analyzed.

Put differently, the questionnaire methodology is likely to rest, to some extent, on compliance processes--individuals saying what they think they should say; the semi-structured interview process is more likely to reveal internalized beliefs held by the respondent.

Questionnaires and interviews were administered in the "everyday" world of the organizational setting. In designing the content areas of the questionnaire and the semi-structured interviews, a conscious attempt was made to provide major amounts of overlap. This overlap was intended to provide some means of controlling the problem of reactive measurement--a significant issue in social science research.[26]

In formal organizations, the problem of reactive measurement is compounded by the measuring instrument and, when different organizational levels are surveyed, the amount of trust that exists in the organizational hierarchy. Since the hierarchically superior level is normally in the position of defining the adequacy of its subordinate's functioning, research questions which tap areas that are controversial between these levels in the organization will produce "reactive measurement". The problem is, put simply, that people respond to the researcher's questions, particularly when they are in the form of a questionnaire, in terms of what they believe the researcher wants them to say, not necessarily the reality of the organizational situation. In part, this is inherent to the nature of questionnaires; they have to be designed in such a way that generalized questions are asked of the respondents and this, in turn, means that only rarely will the structure of the items correspond exactly with the way the respondent would define the situation (assuming the respondent is aware of the same situation). Semi-structured interviews are more open-ended and enable the respondent to project more of his own definition of the situation onto the research question.

If the data from these two areas is similar, it is possible to place greater belief in the measurement product. This does not, however, eliminate the problem of reactive measurement; it only reduces it.[27] Administration of the questionnaires and the interviews also reflected concern with this problem. Throughout the data gathering process, the population of people who were interviewed and given the questionnaire were always interviewed first and then asked to respond to the questionnaire. The less structured technique was applied before the more structured.

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[26] Cf., Campbell and Stanley, pp. 20-22 and Frank Friedlander, "Behavioral Research as a Transactional Process", Human Organization, XXVII (Winter, 1968), p. 372.

[27] Prior to the publication of Chris Argyris' analysis of this problem and suggestions for dealing with it, there was no known strategy to surmount the problem of reactive measurement in an effective way (other than indirect measurement techniques which did not involve the respondents' active participation). Cf., Chris Argyris, Intervention Theory and Method (Reading, Massachusetts: Addison-Wesley, 1970). Especially, Chaps. 4 & 5.

Administration of the Questionnaire

Bearing in mind the problem of reactive measurement, the sample to which the questionnaires were applied was identified in a special way.

The data gathering process began with the open-ended interview of the top twenty-four people in the particular State Agency; after the completion of the interview the respondent was asked to identify two immediate subordinates with whom he felt he had good communication and who would not be involved in any of the formal training adminstered by the AMA. The questionnaires were then administered to the two additional people in a way which insured their anonymity to the extent it was possible.

This process was repeated in each of the State Educational Agencies; the top twenty-four administrators were interviewed, completed a questionnaire, and identified two subordinates who were to complete the questionnaire. This gave a maximum possible population of seventy-two people in each State.[28] Thus twenty-four of these respondents were directly involved in the training program and forty-eight were, from the standpoint of those in the program, likely to be positively biased toward their superior. We assume the presence of "good communications" means the individuals picked will be sensitive to the influences of the training, or, at the minimum, more sensitive to effects than persons excluded from this selection process.

Research Variables Studied

Since this was the first year of a comprehensive training effort and because the program was likely to have greatest impact in two areas--(1) individual awareness/knowledge and (2) role relationships and group standards--it was decided to conceptualize the research areas as falling into what Renis Likert has called causal and intervening organizational variables. Causal variables are ones which

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[28] There is one exception to this statement; in Experimental State #1, two people who were not included in the pre-training interviews and who were not involved in the "Top Management Briefing" but were asked to participate in the training as the program developed, were added to the interview schedule. In short, these two persons were not originally picked for the training but were added later. Neither of these individuals were from the top twelve administrative group.

This increased the maximum possible population in this State to seventy-eight.

> . . . determine the course of developments within an organization and the results achieved by the organization. Causal variables include only those independent variables which can be altered or changed by the organization and its management.[29]
>
> The "intervening variables" reflect the internal state and health of the organization, e.g., the loyalties, attitudes, motivations, performance goals, and perceptions of all members and their collective capacity for effective interaction, communication and decision making.[30]

In the context of this pilot training project, the causal variables are those related to organizational planning and the intervening variables are those which are related to what the AMA called professional management and involves management theory, principles, leadership, communication, control, and motivation. It was not assumed--since the training was only recently completed--that significant effects would be present in the area of organizational output, the third category in Likert's analysis.[31] There are a set of documents which were produced by each State as they undertook the "Educational Planning Process" program and which contain goals, priorities, etc. However, these documents, in our opinion, represent intentions, not necessarily processes and policies which have had the opportunity to be implemented and affect organizational output.

Finally, it should be noted that this report will not cover the impact of the training on both the State Educational Agencies and the respective Pilot Local Educational Agencies. The report will be restricted to only the State Educational Agencies.[32,33]

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[29] Rensis Likert, The Human Organization (New York: McGraw-Hill, 1967), pp. 28-29

[30] Likert, p. 29.

[31] Likert, p. 29.

[32] A report on the first year's effects of training on both the State and Local levels will be available when the forthcoming doctoral dissertation by one of the members of the research team is completed. It is anticipated that this material will be available by June, 1972.
Data gathering at the local level paralleled the process at the State level throughout the research effort.

[33] An analysis of impact at both levels will be available in the report due to USOE on August 31, 1972; it will integrate research findings from both the first and second year of evaluation.

Design of the Questionnaire

The questionnaire was designed around two areas; the first was related to that part of the goals of the AMA program which involved organizational planning and were intended to measure the attitude of organizational members toward these goals. The following questionnaire items were selected to provide this information.

Organizational Planning Process

1. My organization's overall plan is operable. (Item #40)
2. As I see it, planning is an integral part of running the State's schools. (Item #39)
3. The kinds of things I am doing will make a long term contribution to education. (Item #29)
4. The goals of this organization are articulated. (Item #4)
5. Our goals are realistic and attainable with our best efforts. (Item #5)
6. My organization's policy statements are clear. (Item #41)
7. My organization's performance standards are understood. (Item #42)
8. Higher management's reactions to the problems which reach them are fair. (Item #33)

The second set of items relates to role relationships between members of the organization and standards which work units hold.

Role Relationships and Group Standards

1. My work group understands what we are trying to achieve. (Item #26)
2. My manager makes it clear he is committed to the success of our projects. (Item #30)
3. My manager encourages and supports innovation. (Item #14)
4. My group works hard to achieve its goals. (Item #12)
5. The people I work with participate appropriately in setting the goals of our work. (Item #23)
6. I am appropriately involved in decisions affecting my work. (Item #6)
7. Based on information I have received from my boss, I know if I am measuring up in my job. (Item #11)
8. My boss has expressed belief that the American Management Association's training program will be helpful. (Item #43)[34]

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[34] This item was excluded from the questionnaire administered to the control State.

Taken together, these sixteen items are the totality of the material to be taken from the questionnaire.[35] The items were developed from the theory provided by Rensis Likert in The Human Organization.[36]

A seven point scale was the basis for responses to the items.

1	2	3	4	5	6	7
Not at all			Fairly often		Very often	

In an effort to expand the time frame of the research data, the questionnaire was designed to involve two sets of responses to the items--a perspective on the organization when the questionnaire was being administered and an additional perspective. During the administration of the questionnaire prior to the training, the perspectives were Fall, 1969, and Fall, 1970. During the post-training administration the perspectives were Spring, 1971, and Fall, 1971. This was done in order to have a simulated time-series which would describe the organization in the past, immediately prior to training, immediately following training and the expected future and expands the data as indicated below:

Questionnaire Data Base

	Fall, 1969	Fall, 1970		Spring, 1971	Fall, 1971
Experiment #1	0	0	X	0	0
Experiment #2	0	0	X	0	0
Control State	0	0		0	0

Note: 0 = observation; X = training

No assumption will be made that the past and future dimensions are as reliable as the immediate pre- and post-measurement; although we have no reason to believe this data is not equally reliable between States, particularly in terms of the Fall, 1969 data. The question of the reliability of the future data, Fall, 1971, is considerably more complex due to the advent of the training in two organizations and not in the third.

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[35] The questionnaire including the cover sheet was a 4-1/4 page document containing forty-three attitudinal items. (Cf. Appendix B.) Of these, we have utilized sixteen. This was an arbitrary decision based on what we considered to be the most critical items and a preliminary factor analysis of items. Additional item analysis will be included in the forthcoming doctoral dissertation.

[36] Cf., Likert, Op. Cit. A multiple correlation analysis of the items revealed a significant level of correlation existed between the items. This was the only analysis of the items undertaken during the research. A comprehensive factor analysis is currently being done and will be reported in the forthcoming doctoral dissertation and in the second year evaluation report.

From our standpoint, the most useful data is the immediate pre- and post-measurements, and these will receive major emphasis in the text.

Statistical Analysis of the Questionnaire Data

The major problem of statistical analysis of the questionnaire data was to select a statistic which would apply a comprehensive and powerful test to the data. A sub-set of this problem was to determine simultaneously to what extent the compared groups were similar or dissimilar and to what extent the training was producing change as measured by the questionnaire items.

The statistical test chosen for this purpose was Two-Way Analysis of Variance. Conventionally, there are two ways this particular statistic can be designed. One design enables only a comparison of row and column variance and a second enables a comparison of row and column variance plus a test for interaction between rows and columns.[37] The latter form was selected on the grounds it was important to know if the interaction of training effects and differences between States were significantly influencing analysis of the row and column data. In essence, this is a check on the selection-maturation problem which was questionably controlled by the research design (Cf. p.25 of this section).

What this particular statistic does is (1) tests for the existence of significant differences between the States which are being compared (this test is made on the basis of both the mean scores and the variances about each of these means). In addiiton, it (2) tests, on the same grounds--means and variance about the means--for the effects of training on the basis of before and after scores.

The first of these tests, in effect, holds time constant, and answers to question, "Are these groups statistically different from each other?". This is represented by row variance and is summarized by the value of the F statistic. The other analysis, column variance, examines for differences over time and provides an answer to the question, "Did the training program have a statistically significant effect?". Throughout, the .05 level of significance will be the minimum basis for the decision that training did produce a difference.

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[37] Hubert Blalock, Social Statistics (New York: McGraw-Hill, 1960), pp. 253-64. Cf. especially, p. 264.

Design of the Open-Ended Interviews

The persons interviewed in the State Educational Agencies were the twenty-four top administrators chosen by the State Superintendent to participate in the training. This population remained unchanged during both of the interviews. However, due to decisions which were made as the program developed, some of these individuals were not as fully involved as initially expected. In State #1, sixteen out of the twenty-four went through both Top Management Briefing and the Educational Planning Process programs. In Experimental State #2, twenty out of the twenty-four went through both programs. This mid-stream correction may have effected the attitudes of the individuals who expected to be included and were not. This will not constitute a problem in the material to be reported. The analysis of the interviews is restricted to the top twelve administrators in each of the State Educational Offices; the members of this sub-population went through the program as initially conceived.

Conducting the Interviews

Each of the interviews was conducted in a setting which insured maximum privacy and a minimal possibility of interruption. With extraordinarily few exceptions, the interviews were conducted without interruption. Each interview involved thirteen general questions, was tape recorded, and lasted approximately one hour. Respondents were assured that the material they provided would remain anonymous to both the other members of the State Educational Agency and the AMA; and, in addition, the material would be presented in the final report in such a way that it would not be possible to identify the person who provided the information.[38]

The questions asked were:

1. What do you feel you will obtain (obtained) from the AMA training?
2. What is the attitude of your boss toward the AMA training?
3. What do you see as the most important aspects of your job?
4. What is the function of your division or department?
5. How are major decisions made in this organization?
6. What are the roadblocks to change in this organization?
7. What resources are not being used?
8. How do you feel about the direction your organization is moving in?
9. What is the role of planning in the State's school system?
10. How does planning occur in the organization?
11. How do you communicate your plans?
12. What is your role in your organization?
13. Do you enjoy your role?

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[38] This material was typed by a special secretary at the AMA location in Hamilton, New York. The secretary was instructed to let no one other than herself have access to the documents she produced from the tape recordings; the typed material was kept in a locked file throughout the time it was being typed and was given to the research team as soon as it was completed.

Each of these questions were asked and, after the initial response was completed, followed by one or more non-directive probes, "tell me more" or "is there anything you would like to add?", etc. After this, sub-questions were asked and also followed by non-directive probes. There was usually one sub-question asked which narrowed the focus of the general question into a specific area.

Of these thirteen questions, only six will be used to establish the data base for this report. These are:

A. What do you feel you will obtain (obtained) from the AMA training?
B. What is the attitude of your boss toward the AMA training?
C. How are major decisions made?
D. What are the roadblocks to change in this organization?
E. How do you feel about the direction your organization is moving in?
F. What is the role of planning in running the State's schools?

In order to show the potential of each of these questions, the interview situation will be described. Question A was followed by a number of non-directive probes and contained no sub-questions. Question B was constructed and handled similarly. Question C, "How are major decisions made?", contained three sub-questions. "Can you cite a critical incident?", "Describe how a major decision was recently made.", and, if appropriate, "Draw a chart.". Question D, "What are the roadblocks to change in this organization?", was followed by the sub-question, "What resources are not being used?". Question E, "How do you feel about the direction your organization is moving in?", was followed the sub-question, "Is it moving where it should?". Question F, "What is the role of planning in running the State's school system?", was followed by, "Is planning an integral part of running the State's schools?".

In all cases, the interviewer attempted to insure, through non-directive probes, that the interviewee had responded to the question as fully as he could or wished. Then a sub-question was asked. This general orientation was modified as it seemed appropriate in the context of the interviews; for example, when the respondent had already answered the sub-question, an attempt was made to obtain more information but the question itself was not formally asked. Aside from this type of modification, the pattern or process was repeated as exactly as possible[39] with each of the respondents.

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[39] The interviewer worked from a set of cards which contained the main and sub-questions; these cards were used to structure each of the interviews; the ordering of items was always maintained.

Analysis of the Semi-Structured Interview Data

The material produced by the interviews[40] was content coded.[41] This involved the development of a set of coding categories for each of the general questions and a scaling technique. In other words, a procedure was initiated to organize this information in a way that would provide answers to specific questions being researched. These categories were developed on the basis of the goals of the AMA training program and, as in the case of the questionnaire, the areas which the training had the greatest potential to impact. In addition, a random sample of the interviews was inspected in order to obtain a sense of the categories which were likely to appear throughout the materials. A seven point scale was used to record the data generated by analysis of the typed interviews: Although the adjectives used to denote the intensity of statements to each of these categories was made idiosyncratic to each particular category to be scaled, the intent was to utilize a similar scaling process throughout the process.[42]

The content analysis instrument produced for this purpose contained seventy-five categories· we will utilize only twenty-three in this report.[43] These twenty-three categories and the interview questions to which they are associated are listed below.

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[40] The tape recorded material produced approximately fifteen pages of double spaced material per respondent. This material has been given an anonymous code number and is available in the Maxwell Library.

[41] Cf. Robert North, Content Analysis (Evanston: Northwestern Univ. Press, 1963); Ole R. Holsti, Content Analysis for the Social Sciences and Humanities (Reading, Massachusetts: Addison-Wesley, 1969); and Bernard Berelson, Content Analysis in Communication Research (Glencoe, Illinois: Free Press, 1952).

[42] The coding sheet utilized for this purpose is found in Appendix C.

[43] Most of the categories excluded from this report will be included in the forthcoming doctoral dissertation available in the Spring of 1972.

Interview Questions and Content Analysis Categories

A. What do you think you will obtain (obtained) from the AMA training?

1. Definition of the institution's mission.
2. Modify previously established objectives.
3. Identify and analyze alternative courses of action.
4. Determine priorities.
5. Define standards of performance for key administrators.
6. Specify task completion dates and action assignments.
7. Assign responsibilities to subordinate units.
8. Design a methodology by which future performance may be evaluated in relation to the performance specified in the plan.
9. Produce and implement a long-range strategic plan.
10. Establish credibility of planning.
11. Promote cooperative team work.

B. What is the attitude of your boss toward the AMA training program?

12. (Question acts as research category; no sub-classification necessary.)

C. How are major decisions made?

13. Involvement in decision-making.
14. Quality (effectiveness) of decision-making.

D. What are some of the roadblocks to change?

15. Organization reacts to problems rather than anticipates and deals with problems.
16. Sense of State Educational Agency mission.
17. Employee inter-personal skills.
18. Amount of cooperative teamwork present.
19. Degree to which persons within organization will support change.

E. How do you feel about the direction your organization is moving in?

20. (Question acts as research category; no sub-classification necessary.)

F. What is the role of planning in running the State's schools?

21. Role of planning (how integral is it?)
22. Need for planning (how much is needed?).
23. Emergence of planning (when it became an issue?).

With the exception of Questions A & B, and their respective content categories, all of these categories were applied to the typed interview material obtained from each of the States. The first two questions were only asked in the two experimental States and not asked in the control State. These two questions could have applicability only in the States which were to undergo or did undergo the AMA program. A comparative analysis of the data obtained from only the two experimental States will be presented in the report; in all other instances, the material reported will involve all three States.

Content categories one through 10, 16 and 21 through 23 are what we earlier called causal variables related to the organizational planning process; categories 11 through 15 and 17 through 19 are what we called intervening variables related to role relationships and group standards.

Procedures Used in Content Coding

Since the validity of this entire procedure depended heavily upon shared understanding between the people doing the coding, the process by which the content analysis recording materials (the content domains and analysis of the sample interviews) was developed involved the coders as deeply as possible. In order to insure this material would be treated as objectively as possible, the field researcher and the two persons responsible for conducting the field research for the August, 1972 evaluation report were chosen to undertake this project and do the coding. Every effort was made to insure mutual understanding and mutuality of the way the material was coded. Several trial runs were undertaken in which each of the coders independently coded the same interview and then the product was compared to determine if there was a high degree of similarity in the way each person was proceeding. Once this seemed to be the case, the entire body of seventy-two interviews was coded.

The coders read the entire interview document prior to coding. This was done to avoid the assumption the interviewee's verbal response always proceeded in an exactly logical or sequential manner; through this approach, it was possible to incorporate remarks which were appropriate to an earlier section of the interview but were not articulated until later. The intent was to give the respondent every possible opportunity to provide recordable material for the research; since this meant, in many instances, matters which were keyed directly to the goals of the AMA project, this also means that, if anything, there will be a positive bias to the scores recorded.

Statistical Analysis of the Content Data

Since the number of people included in this analysis is small, it was necessary to select statistical tests which were expressly designed for small samples--non-parametric statistics. Since the semi-structured interview is designed to enable the respondent to project his own definition of the situation onto the research question, there was considerable fluxuation of the number of respondents to each of the research categories defined by the coding instrument. This fluxuation provides one point of analysis and, the scaling technique which recorded the intensity of response provided a second point of analysis. In order to test for differences of intensity of reaction, the Kruskal-Wallis One-Way analysis of variance was applied to the scale scores. This test is capable of handling extremely small numbers of respondents and still provide a meaningful analysis of the probability of differences between groups.[44]

A second test was also necessary. This test was to determine if the training program had the effect of significantly increasing the awareness of the respondents of the various areas being researched. In other words, the problem was to test to see if the number of persons who responded to the research categories was different after the training than before and to compare the several states on this basis. The test chosen for this purpose was the Binomial Test of Proportions.[45]

These two tests will enable decisions to be made on the grounds of (1) "Is there a difference between the groups as to the importance attributed to a research domain?", and (2) "Is there a significant fluxuation of respondents, independent of intensity expressed, between the before and after interview?". In other words, "Do more people become conscious of the particular issue?". Comparisons between the experimental and control State will be made on both of these bases.

Summary

This section has presented the provisional research design and the final design used in the study. An analysis of the strengths and weaknesses of each has been made. The way the research data was gathered and the determination of the sample populations has been explained. Each of the data gathering techniques--questionaires and semi-structured interviews--and their design and implementation have been discussed at some length. Finally, the types of statistical analysis and the underlying logic which led to their selection has been presented.

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[44] Cf., Sidney Siegel, Non-Parametric Statistics for the Behavioral Sciences (New York: McGraw-Hill, 1956), pp. 184-93.

[45] Hubert Blalock, pp. 176-77.

FINDINGS AND ANALYSIS

This section will be focused on the question, "To what extent did the AMA program change the attitudes of people in the two experimental organizations?". Because of the nature of the training design and the type of training administered, this general question is composed of two sub-questions. "What impact did the training have on individual awareness/knowledge in relation to organizational planning?", and, "What impact did the program have on role expectations and group standards?".

This analysis rests on the assumption that organizational members behave on the basis of a complex network of beliefs, values, norms, and definitions of reality which are specific to the organization. Training is presumed to be an effort to modify this set of orientations to the "everyday world" in the organization.

We do not assume there is necessarily a direct relationship between expressed beliefs and actual behavior--that beliefs and values people hold are necessarily consistent with their overt behavior.

Attitudinal change is a necessary condition to changing organizational behavior but not a necessary and sufficient condition. Social reality in an organization is considerably more complex and is in all cases conditioned by perceived possibilities of action "in-the-situation". These possibilities are, as suggested earlier, shaped by the environment (political-economic-social) of the organization, relationships between and among departments, group norms or standards, action possibilities created by technology, and the orientation of individual's toward organizational processes.

Based on an examination of the training program, it was decided that the most probable impact of the training would be in two areas: (1) individual awareness/knowledge and (2) role relationships and group standards. These areas were called linkages to organizational change. If the role of organizational planning was to change in the organization (and therefore change the organization), these would be the two "forces" which would promote the change--a change which would ultimately be reflected in both behavior patterns and the output or effectiveness of the organization.

In order to study this set of factors, two kinds of data were collected; the first of these was produced through content analysis of the semi-structured interviews with the top twelve administrators in each of the three States. This data is based on the administrators' responses to thirteen general questions about organizational processes and planning.

The second kind of data was produced by questionnaires which were applied to a specially selected population of people. This population was composed of the top twenty-four administrators in the State Educational Offices plus forty-eight of these administrators' subordinates.

The subordinates were selected on the basis of the organizational superior's belief that good communication existed between them; using this criteria, each of the administrators picked two subordinates to be included in the study. None of the subordinates went through the training program.

Thus the population to which the questionnaire was administered contains the people most likely to experience the immediate effects of the training program as it is translated into the organization. And there is overlapping between two populations: the top twelve administrators who provided the content data are also included in the population that provided the questionnaire data.

Reporting Format

When the research data is reported, the material from the top twelve will be presented first and then followed by the questionnaire material which is taken from the larger population of respondents. We chose this reporting sequence because it is consistent with the way the training program was designed and implemented. The program rested on the assumption organizational change would start at the top and work downward.

Two general headings will be used to organize the research findings: (A) Organizational Planning Process and (B) Role Relationships and Group Standards. Each of these general headings has been broken into several sub-headings; these sub-headings were developed to provide conceptual clarity and greater simplicity in reporting the findings.

Statistical Analysis

Presentation of the statistical analysis is quite complex despite our efforts to simplify everything that could be simplified. Consequently, it is important that a clear understanding is built with regard to the information each of the statistics provides and how this is represented in the tables included in this text.

Three statistics were utilized; two were applied to the content analysis material and one was applied to the questionnaire material.

Analysis of the Interview Material

One of the statistics applied to the content data was the Kruskal-Wallis One-Way Analysis of Variance. This test is designed for very small samples and enables decisions to be made about the comparability or lack of comparability of two groups.

The procedure utilized in this test is to pool the scores of individuals from both groups and then rank this total set of data from high to low; each individual's score is translated into an ordered ranking in which the highest individual score in the pool would receive the lowest numerical score. In other words, the individual whose response was highest would receive the ranking of one, the individual with the second highest response would receive a two, etc., until all individuals have been ranked. A special technique is utilized to handle ties in ranking. Then this aggregate data which is composed of responses from both groups is redistributed back to individual group rankings. Based on a comparison of the strength of these rankings in each group, a decision can be made, based on probability, about whether the groups are or are not different.

So, the Kruskal-Wallis test enables us to make a decision as to which group placed the greatest emphasis on the research category. This test is not affected by the number of respondents in each group; it simply says (given whatever number of respondents there were) is the degree of emphasis different between the groups? The test statistic which provides this information is the H statistic. Only when this value is such that the .05 or greater level of significance[1] is obtained will be say a difference existed between the groups being studied.

A second test was included to examine the question of what kinds of flucuations were occurring in the number of respondents and whether or not these flucuations were significant between groups. This is an important question because the semi-structured interview was designed to enable the respondent to say what was important to him at that particular point in time. If the training program had an impact on attitudes, it is possible that a larger number of people would become aware of specific issues after the training than were aware of the same issues prior to training.

In other words, the question we wanted to explore was, "Did the training have the effect of changing the population of people who were aware of specific issues?". Since we could answer the question of changing emphasis by the test previously described, we wanted to determine if, independent of intensity of reaction, aggregate awareness changed. The Binomial Test of Proportions provides this information. It provides a useful analysis *so long as the population is less than twelve*; in those cases where all of the persons interviewed provided information relevant to the research category, the test has no meaning because awareness of the issue already existed for all people.

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[1] In case the reader is not familiar with this terminology, the .05 level of significance means that if we say a difference exists between groups we would expect to be incorrect in making this inference only five times out of a hundred. By the phrase greater significance we mean the .01 or .001 level which means we would expect to be incorrect in saying a difference existed between the groups only once out of one hundred times or once out of one thousand times respectively. The greater the significance the greater the probability of a correct decision.

The test statistic which summarized this information is the Z statistic; only when this value is such that the .05 level (or greater) is obtained will we say a difference existed between the groups studied.

Summary: Statistics Used to Analyze Content Material

Major reliance will be placed in the text on the Kruskal-Wallis statistic; in a number of instances the test of proportions also will be used. The first of these tells us if there is a significant change in the *degree of emphasis* given to a particular research category when one group is compared to another. The second test tells us if there was a significant increase in the *degree of aggregate awareness*, independent of intensity expressed, which can be attributed to the effect of training or which existed between the groups.

Finally, it should be pointed out that interpretation of these statistics is more straightforward in some instances than in others. Because interview questions which were directly related to expected or actual experience with the AMA training program were only relevant to the two Experimental States, we are faced with the problem of a weak research design whenever these kinds of questions are encountered. In other words, with regard to such questions we are in the situation of a research design in which there is no Control group (and which is subject to all the problems we attributed to the provisional research design which was described in the methodology chapter).[2] This problem of validity of interpretation will occur whenever content categories which were developed in relation to the first and second interview question are included in the report.[3]

Twelve out of the twenty-three content categories which will be reported were drawn from responses to the first two interview questions; the interpretation of these twelve items should be regarded as more tenuous than is the case with the remaining eleven content categories. Even though we were aware of this problem, we decided to include the twelve items because they bear a direct relationship to the goals of training and to the attitudes of the top twelve administrators toward the training.

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[2] Cf., pp. 16 in the Methodology Section.

[3] Cf., Appendix C , interview questions 1 and 2.

The remaining eleven categories are all based on the "Non-equivalent Control Group" research design and can, therefore, be interpreted more meaningfully. Far fewer threats to the validity of interpretation are present in this context because of the research design.

Analysis of the Questionnaire Items

Only one statistical test was applied to the questionnaire item: the Parametric Two-Way Analysis of Variance. This test provides a two-fold analysis of the data. The first analysis is called column variance; in the context of this study, analysis of column variance is an analysis of the effect of training. The analysis of column variance will tell us if change occurred between the scores obtained in two different time periods.

The second test is based on an analysis of row variance; for the purposes of this study, this means an analysis of differences between the States, independent of changes that occurred over time within the States. In other words, the test enables us to answer the question, "Are the States different from each other in the amount of emphasis given to a particular item when change in emphasis given to the item is held constant and our only concern is the amount of emphasis given in each of the States for a specified time period?".

The reader should be sure that the differences between these two types of tests, column variance and row variance are clearly understood before proceeding further in the text.

Again, we will use only .05 or greater levels of significance to decide whether the groups are different from each other or if there was significant change in the amount of emphasis given to a particular item during a specified time period.

In particular, we will be concerned about the time period, Fall, 1970, to Spring, 1971; this is the immediate pre- and post-training time period. Analysis of other periods, the Fall, 1969, to Fall, 1970, and the Spring, 1971, to (conjectured) Fall, 1971, will also be made but these will receive much less emphasis.

With one exception, there will be only one research design evoked in the analysis of the questionnaire data, and it will be the "Non-equivalent Control Group Design". Thus, the meaning of the questionnaire data is generally more straightforward than was the case of the content items. The one exception is the last questionnaire item which asked about the attitude of managers toward the AMA training; this item was only applicable to the two Experimental States. When this exception is encountered in the text the reader will be reminded of the problems that are involved.

Research Data: Section I

Organizational Planning Process

All of the material presented in this section is related to the goals of the training program; due to the number of variables involved and because of the need for conceptual unification, the section is divided into four sub-areas:

(A) Definition of the Mission of the Organization
(B) Mobilization of Organizational Planning
(C) Operational Impact of Training on Organizational Planning
(D) Credibility of the Planning Process

Throughout this section and the one which follows, we will follow a pattern of presenting the content analysis data before the questionnaire data. This will give the reader the reactions of the top twelve administrators and then the reactions of individuals from the State Educational Agencies who are from multiple levels in the organization and had different kinds of relationship to the training program.

Definition of the Mission of the Organization

Four perspectives on the question of definition of organization mission will be made; these perspectives are provided by three items from the content analysis and one item from the questionnaire.

Since the content categories were drawn from various parts of the interviews, three comments will be provided with each of the categories. These comments will identify the general interview question which provided the main opportunity for the respondent to provide material for the content category, the range of scale possibilities[4] which was used to code the interview material and the States to which the category was applicable.

Content categories

1. Definition of Institution's mission

Interview question: What do you expect to obtain (obtained) from the AMA's training program?

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[4] "No codeable response" was given a "zero".

Range of Scale Possibilities: (1) no value to (7) maximum value

States: Experimental States only

2. Sense of SED Mission

Interview question: What are some of the roadblocks to organizational change?

Range of Scale Possibilities: (1) major roadblock which always stops organizational change to (7) weak roadblock/seldom stops change

States: Experimental States and Control State

3. Feelings about the direction the organization is moving

Interview question: How do you feel about the direction your organization is moving?

Range of Scale Possibilities: (1) not satisfied at all to (7) completely satisfied

States: Experimental States and Control State (hereafter called E_1, E_2, and Control).

The questionnaire item is:

4. The kinds of things I am doing will make a long term contribution to education.

As with all questionnaire items, four time perspectives were applied to this item--Fall, 1969; Fall, 1970 (immediate pre-program period), Spring, 1971 (immediate post-program period), and Fall, 1971. The scale alternatives with which the person could respond ranged from not at all (1) to very often (7). "No response" was recorded as "zero". (Since this circumstance is true of all questionnaire items, no further commentary on the response modes will be made.)

Item 1 : Definition of the Institution's Mission

Fall, 1970		Spring, 1971		Fall, 1970 to Spring, 1971			
E_1 & E_2		E_1 & E_2		E_1 & E_1		E_2 & E_2	
N	N	N	N	N	N	N	N
4	8	10	11	4	10	8	11

Kruskal-Wallis One-Way Analysis of Variance

H= 1.219 Sig.= NS	H= 0.600 Sig.= NS	H= 0.005 Sig.= NS	H= 4.260 Sig.=.05

Item 2 : Sense of SED Mission

Fall, 1970						Spring, 1971						Fall, 1970 to Spring, 1971					
E_1 & C		E_2 & C		E_1 & E_2		E_1 & C		E_2 & C		E_1 & E_2		E_1 & E_1		E_2 & E_2		C & C	
N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
5	2	9	2	5	9	6	3	4	3	6	4	5	6	9	4	2	3

Kruskal-Wallis One-Way Analysis of Variance

H= 0.000 Sig.= NS	H= 0.056 Sig.= NS	H= 0.160 Sig.= NS	H= 0.017 Sig.= NS	H= 0.125 Sig.= NS	H= 0.102 Sig.= NS	H= 0.075 Sig.= NS	H= 0.095 Sig.= NS	H= 0.333 Sig.= NS

Binomial Test of Proportions

Z= -1.37 Sig.= NS	Z= -3.50 Sig.=.01	Z= 1.73 Sig.= NS	Z= -1.30 Sig.= NS	Z= -0.44 Sig.= NS	Z= -0.83 Sig.= NS	Z= 0.40 Sig.= NS	Z= -2.23 Sig.=.05	Z= 0.50 Sig.= NS

Item 3 : How do you feel about the direction your organization is moving?

Fall, 1970						Spring, 1971						Fall, 1970 to Spring, 1971					
E_1 & C		E_2 & C		E_1 & E_2		E_1 & C		E_2 & C		E_1 & E_2		E_1 & E_1		E_2 & E_2		C & C	
N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12

Kruskal-Wallis One-Way Analysis of Variance

H= 0.187 Sig.= NS	H= 6.307 Sig.=.05	H= 7.680 Sig.=.01	H= 0.041 Sig.= NS	H= 9.188 Sig.=.01	H=12.608 Sig=.001	H= 0.213 Sig.= NS	H= 0.120 Sig.= NS	H= 0.521 Sig.= NS

Binomial Test of Proportions

Z= 0.00 Sig.= NS	Z= 0.00 Sig.= NS	Z= 0.00 Sig.= NS	Z= 0.00 Sig.= NS	Z= 0.00 Sig.= NS	Z= 0.00 Sig.= NS	Z= 0.00 Sig.= NS	Z= 0.00 Sig.= NS	Z= 0.00 Sig.= NS

Item 4 : The kinds of things I am doing will make a long term contribution to education.

	Fall '69 T_1			Fall '70 T_2			Spring '71 T_3			Fall '71 T_4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experiment (#1)	39	4.872	1.657	39	5.436	1.553	73	5.630	1.339	73	5.753	1.299
Experiment (#2)	60	5.100	1.337	60	5.467	1.214	51	5.196	1.233	52	5.558	1.074
Control (C)	65	5.353	1.494	66	5.697	1.301	61	5.393	1.159	61	5.557	1.148
Total	164			165			185			186		

TWO-WAY Anal. of Variance		T_1 & T_2		T_2 & T_3		T_3 & T_4	
		F	Signif.	F	Signif.	F	Signif.
Experiment #1 W/ Control State	Col.	3.083	NS	0.005	NS	2.003	NS
	Row	4.595	.05	0.096	NS	0.882	NS
Experiment #2 W/ Control State	Col.	2.036	NS	1.785	NS	0.407	NS
	Row	4.377	.05	3.217	NS	2.894	NS

Since this is the first interpretative example of the statistical findings, the commentary will go into extra detail in order to enable the reader to more clearly follow the process. References to material in the appendices will be made at critical junctures where information that could not be included in the previous statistical tables is available. This will not be a frequent practice, but on certain occasions it will occur.

Item #1, "Definition of the Institution's Mission", was applicable only to the two Experimental groups. In the Fall of 1970 (when data was gathered prior to the training program) no statistically significant differences existed between the two Experimental States as to the value of defining the institution's mission, and in the Spring of 1971 (when data was gathered after the program had been executed) no differences existed. Analysis of each State over time, Fall, 1970, to Spring, 1971, revealed that no change in emphasis occurred in Experimental State #1. A statistically significant change did occur in Experimental State #2; this change was due to decreased emphasis being placed on defining the institution's mission.[5] Statistically significant change in the one State was not, however, sufficient to produce differences between the Experimental States in the post-training period.

From the viewpoint of research design item 2, "Sense of SED (State Educational Department) Mission", provides a more sound basis for assessment;[6] data for this item was gathered from all three States.

The amount of emphasis given to this category as a roadblock to change was not affected by the training program. Comparison of each Experimental State with the Control State both before and after training revealed no differences between any of the States. And analysis of each State through time (Fall to Spring) also indicated no significant change had occurred in emphasis given the role sense of SED missions played as a roadblock to organizational change.

The test of proportions was also applied to this item in an effort to answer the question, "Was awareness of this variable (independent of emphasis) different between the States, and did it change over time?". Out of nine possible comparisons, two showed significant differences. The first was between Experimental organization #2 (hereafter called E_2) and the Control State prior to training; more people in E_2 were aware of this variable than was the case in the Control group. This difference between E_2 and the Control was not present in the post-training period.

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[5] We have indicated this shift point by placing a plus (+) on the schematic chart in the Appendix which depicts the relationships and statistics associated with this variable. Cf. Appendix A, p. v.

[6] Cf. Appendix A, p. vi for schematic.

In addition, when E_2 was compared against itself for the two time periods, the same significant change was found; this change was one of reduced awareness of this variable as a roadblock in E_2. In the other Experimental State awareness remained the same over time and remained similar to the Control group both before and after training.

The amount of emphasis placed on this variable as a roadblock to change was not effected by the training; in one State (E_2) training had the effect of reducing awareness of the variable. (In this context awareness simply means the number of people who provided data for the research variable.)

Item #3, "How do you feel about the direction your organization is moving?", was asked in all three States. No differences in satisfaction with organization direction existed between Experimental State #1 (hereafter called E_1) and the Control State prior to training; differences did exist, however, between E_2 and the Control State prior to training; this difference was due to the Control State which reflected greater satisfaction with the organizational direction than did E_2.[7]

Comparison of E_1 and E_2 for both pre- and post-training periods indicated greater satisfaction existed with the direction organization E_1 was moving than was the case in E_2. In fact, these differences were greater after training than before.[8]

Independent analysis of each of the three States showed no statistically significant change between the Fall of 1970 and the Spring of 1971.

Since the maximum number of respondents (twelve top administrators) was included in each of the points of time and comparisions, no test of differences in awareness could be made.

Satisfaction with organizational direction was not effected by the training program in E_1 as compared to the Control State; in the case of E_2, comparison with the Control State indicates relative satisfaction with organizational direction decreased as a consequence of training. Differences between the two Experimental States remained in the same direction, (greater satisfaction in E_1 than in E_2) and grew even greater as a consequence of training.

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[7] Cf. Appendix A, p. v for schematic.

[8] The statistical difference between E_2 and the Control was .05 prior to training and .01 following training; the significance level between E_1 and E_2 prior to training was .01 and .001 after.

Item 4: Fall, 1970 to Spring, 1971

Item #4, "The kinds of things I am doing will make a long term contribution to education.", a questionnaire item,[9] revealed no significant differences existed between either E_1 and the Control State or E_2 and the Control which could be attributed to either training (represented by column F on the previous tables) or differences between any combination of these States (represented by row F on the previous tables). The degree to which people in the States believed they were doing things which would make a long term contribution to education did not change when the pre- and post-training periods are compared (column F in the tables); and, the relative strength of belief between the States (row F in the tables) was not statistically different in either Fall, 1970, or Spring, 1971.

Item 4: Fall, 1969 to Fall, 1970

Using the historical data which this item provided (Fall, 1969 to Fall, 1970) indicates there were historical differences between the three States. Analysis indicated that the States were different in how much they believed they were contributing to education but there was no differential change through time. In short, E_1 and the Control start different and end different for this period. The same general situation holds for E_2 and the Control State. If the means ($\bar{X}$) for this set of comparisons is examined, a pattern of general increase in belief in all three States for the period Fall, 1970, and Fall, 1971, can be discerned. By the period, Fall, 1970, to Spring, 1971, this trend had eliminated the statistical differences between the States.

Item 4: Spring, 1971 to Fall, 1971

The post-training period, Spring, 1971, to (conjectured) Fall, 1971, reveals no significant differences between the Experimental States and the Control State.

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[9] Cf. Appendix A, p. x for graphs.

DATA SUMMARY
DEFINITION OF THE MISSION OF THE ORGANIZATION
Fall, 1970--Spring, 1971

Item	Type of Data	IMPACT OF TRAINING		
		Positive Effect	No Effect	Negative Effect
	CONTENT			
1	Definition of the Institution's Mission		E_1	E_2
2	Sense of SED Mission		E_1, E_2	
3	Feelings about the direction the organization is moving		E_1, E_2	
	QUESTIONNAIRE			
4	The kinds of things I am doing will make a long term contribution to education.		E_1, E_2	

Training had no effect on the value given to defining the institution's mission, in fact, it reduced it in State E_2. Considered as a roadblock to change, the training again had no effect (positive or negative) in changing the degree to which this was a problem. The tests for awareness, as reflected by the number of people who provided data to the research category, showed no differences except that E_2 became less aware of this variable as a roadblock. This does not mean emphasis changed in E_2; it only means that significantly fewer people mentioned it. Feelings of satisfaction with the direction the organization was moving did not change as a result of training; initial differences which existed prior to training in the two Experimental States increased or intensified as a result of the training.

The questionnaire item which was focused on the degree people in the organizations felt they were making a long term contribution to education revealed a similar pattern; no training effects were manifest in the pre- to post-training period, and no differences between the State held. Viewed historically, (Fall, 1969 to Fall, 1970) there was a general trend in all three States to believe each was increasing its contribution to education and this trend was such that differences between the States were obliterated before the training was given.

Overall, we conclude that the training program had no effect on attitudes about the value of defining the institution's mission, how much of a roadblock its definition constituted to organizational change, how satisfied people were with the direction their organization was pursuing or how much of a contribution the respondents were making to education.

Mobilization of Organizational Planning

All of the material reported under this heading is drawn from the semi-structured interviews. And all of the research categories (eight in total) are steps which the AMA identified as essential to effective organizational planning. All of the items are AMA training goals.

This data is, in addition, drawn only from the two Experimental States in terms of how the top twelve administrators in each of the respective States defined (1) what they expected to obtain from the AMA training and (2) what they said they obtained from the training. The Control State was not asked this question in the interviews. The question is, "Did the training change either the amount of emphasis given to the planning steps and/or the number of people who became aware of these various steps?".

Since the same interview question was used to produce the material for all of the content categories, the range of scaling possibilities (1 = no value to 7 = maximum value) was the same for all categories and the same States were always involved, this information is not repeated below each of the categories.

1. Modify previously established objectives.
2. Identify and analyze alternative courses of action.
3. Determine priorities.
4. Define standards of performance for key administrators.
5. Specify task completion dates and action assignments.
6. Assign responsibilities to subordinate units.
7. Design a methodology by which future performance may be evaluated in relation to the performance specified in the plan.
8. Produce and implement a long-range strategic plan.

Item 1 : Modify previously established objectives

Fall, 1970		Spring, 1971		Fall, 1970 to Spring, 1971			
E_1 & E_2		E_1 & E_2		E_1 & E_1		E_2 & E_2	
N	N	N	N	N	N	N	N
4	8	11	11	4	11	8	11

Kruskal-Wallis One-Way Analysis of Variance

H= 0.029 Sig.= NS	H= 0.475 Sig.= NS	H= 0.038 Sig.= NS	H= 0.288 Sig.= NS

Item 2 : Identify and analyze alternative courses of action

Fall, 1970		Spring, 1971		Fall, 1970 to Spring, 1971			
E_1 & E_2		E_1 & E_2		E_1 & E_1		E_2 & E_2	
N	N	N	N	N	N	N	N
6	6	6	8	6	6	6	8

Kruskal-Wallis One-Way Analysis of Variance

H= 1.256 Sig.= NS	H= 1.350 Sig.= NS	H= 0.519 Sig.= NS	H= 1.204 Sig.= NS

Item 3 : Determine Priorities

Fall, 1970		Spring, 1971		Fall, 1970 to Spring, 1971			
E_1 & E_2		E_1 & E_2		E_1 & E_1		E_2 & E_2	
N	N	N	N	N	N	N	N
5	7	10	9	5	10	7	9

Kruskal-Wallis One-Way Analysis of Variance

H= 0.949 Sig.= NS	H= 0.202 Sig.= NS	H= 6.615 Sig.=.05	H= 3.835 Sig.=.05

Item 4 : Define standards of performance for key administrators

Fall, 1970		Spring, 1971		Fall, 1970 to Spring, 1971			
E_1 & E_2		E_1 & E_2		E_1 & E_1		E_2 & E_2	
N	N	N	N	N	N	N	N
2	2	9	5	2	9	2	5

Kruskal-Wallis One-Way Analysis of Variance

H= 0.600 Sig.= NS	H= 0.360 Sig.= NS	H= 0.056 Sig.= NS	H= 0.150 Sig.= NS

Item 5 : Specify task completion dates and action assignments

Fall, 1970		Spring, 1971		Fall, 1970 to Spring, 1971			
E_1 & E_2		E_1 & E_2		E_1 & E_1		E_2 & E_2	
N	N	N	N	N	N	N	N
1	3	9	8	1	9	3	8

Kruskal-Wallis One-Way Analysis of Variance

H= 1.800 Sig.= NS	H= 0.750 Sig.= NS	H= 0.273 Sig.= NS	H= 1.260 Sig.= NS

Item 6 : Assign responsibilities to subordinate units

Fall, 1970		Spring, 1971		Fall, 1970 to Spring, 1971			
E_1 & E_2		E_1 & E_2		E_1 & E_1		E_2 & E_2	
N	N	N	N	N	N	N	N
2	3	6	4	2	6	3	4

Kruskal-Wallis One-Way Analysis of Variance

H= 0.083 Sig.= NS	H= 1.136 Sig.= NS	H= 1.361 Sig.= NS	H= 4.500 Sig.=.05

Item 7 : Design a methodology by which future performance may be evaluated in relation to the performance specified in the plan

Fall, 1970		Spring, 1971		Fall, 1970 to Spring, 1971			
E_1 & E_2		E_1 & E_2		E_1 & E_1		E_2 & E_2	
N	N	N	N	N	N	N	N
4	7	8	7	4	8	7	7

Kruskal-Wallis One-Way Analysis of Variance

H= 3.571 Sig.= NS	H= 2.815 Sig.= NS	H= 7.385 Sig.=.01	H= 7.800 Sig.=.01

Item 8 : Produce and implement a long-range strategic plan

Fall, 1970		Spring, 1971		Fall, 1970 to Spring, 1971			
E_1 & E_2		E_1 & E_2		E_1 & E_1		E_2 & E_2	
N	N	N	N	N	N	N	N
5	10	10	10	5	10	10	10

Kruskal-Wallis One-Way Analysis of Variance

H= 0.634 Sig.= NS	H= 0.321 Sig.= NS	H= 0.375 Sig.= NS	H= 5.491 Sig.=.05

No significant changes occurred on Item 1 or 2,[10] either between States or within particular States over the period Fall, 1970, to Spring, 1971. Training did not increase or decrease the emphasis among the top twelve managers in the Experimental States with regard to the value of modifying previously established objectives or identifying and analyzing alternative courses of action.

Item 3, Determine priorities,[11] decreased in value to the top twelve administrators between the Fall and Spring. The two States, E_1 and E_2 were not statistically different before or after training and both States reflected significant change between the two time periods. In both States, greater value was placed on determination of priorities prior to training than was given after training.

Define standards of performance for key administrators, Item 4, was not of different value to the two States either before or after training. No changes occurred within the organizations over time.[12]

The same circumstances hold for Item 5, Specify task completion dates and action assignments.[13]

The sixth item, Assign responsibilities to subordinates,[14] was not significantly different in the way it was regarded by the two States either before or after training. Although one State, E_2, did reflect significant changes over time, this change was to decrease the emphasis given to assigning responsibilities to subordinates.

Both E_1 and E_2 were not statistically different prior to training or after training in terms of Item 7, Design a methodology by which future performance may be evaluated in relation to the performance specified in the plan.[15] However, both States reflected significant change during the pre- post- time interval. This change was to decrease emphasis in this area; the amount of change was similar for both States because there were no differences between the States after training.

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[10] Cf. Appendix A, p. xi for schematic of Item 1 and p. xii for Item 2.

[11] Cf. Appendix A, p. xiii for schematic.

[12] Cf. Appendix A, p. xiv for schematic.

[13] Appendix A, p. xv.

[14] Appendix A, p. xvi.

[15] Appendix A, p. xvii.

The last item, *Produce and implement a long-range strategic plan*,[16] changed in E_2 between the pre- and post-training period. This change was in a downward direction, less value was attributed after training than before. No differences existed between the Experimental States either before or after training.

DATA SUMMARY
MOBILIZATION OF ORGANIZATIONAL PLANNING
Fall, 1970--Spring, 1971

Item	Type of Data	IMPACT OF TRAINING		
		Positive Effect	No Effect	Negative Effect
	CONTENT			
1	Modify previously established objectives		E_1, E_2	
2	Identify and analyze alternative courses of action		E_1, E_2	
3	Determine priorities			E_1, E_2
4	Define standards of performance for key administrators		E_1, E_2	
5	Specify task completion dates and action assignments		E_1, E_2	
6	Assign responsibilities to subordinate units		E_1	E_2
7	Design a methodology by which future performance may be evaluated in relation to the performance specified in the plan			E_1, E_2
8	Produce and implement a long-range strategic plan		E_1	E_2

Analysis of these eight items (which constitute three-fourths of the training goals) revealed that in no case were the two Experimental States different from each other either before or after training. With four exceptions, no change occurred within the States. In two of these cases (Items 3 and 7) both States significantly decreased the emphasis they gave to these areas and in the other two cases (Item 6 and 8), one of the States decreased emphasis.

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[16] Appendix A, p. xviii.

If the context from which these items were drawn is considered, i.e., responses of the top twelve administrators to the first general interview question, "What do you expect to obtain (obtained) from the AMA training?", then it seems that with the exceptions indicated, they obtained from the AMA what they expected to get.

These findings should, however, be interpreted with all of the caution that is appropriate to a research design which does not provide for the inclusion of at least one Control group.[17]

Operational Impact of Training on Organizational Planning

This section is based entirely on questionnaire items administered to all three States; these five items are designed to obtain perceptions about how specific aspects of organizational planning are realized in the organization. Since these items are related to on-going operations they are not directly and explicitly related to the AMA's training goals but if the conceptual step is taken from the goals to what pursuance of the goals would mean in organizational operations, these items can be related. How the research team defined this relationship will be indicated in the comments following each item. Scaling of responses will not be discussed since this was explained earlier in the text and remained consistent throughout all of the questionnaire.

1. My organization's overall plan is operable.

   This relates to two training goals: (1) established continuing objectives and planning procedures for long-range achievement of the institution's mission and (2) produced and are implementing a long-range strategic plan. As we conceive it, operability of the planning effort requires basic achievement of both of the AMA goals.

2. The goals of this organization are articulated.

   Determination of priorities, a goal of AMA's efforts, is seen to be the basic factor to which this item is tied.

3. Our goals are realistic and attainable with our best efforts.

   As above, this item is related to the degree to which organizational priorities are operationally meaningful in the organization.

4. My organization's policy statements are clear.

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[17] Cf. Methodology section, pp. 25.

The training goals of (1) defining standards of performance for key administrators and (2) assigning responsibilities to subordinate units, are partially addressed by this item.

5. My organization's performance standards are understood.

This item is related to the extent to which the AMA goal of defining standards of performance for key administrators is achieved.

All of the items in this analysis are drawn from the questionnaire and therefore include three comparative time periods each, Fall, 1969, to Fall, 1970, Fall, 1970, to Spring, 1971, and Spring, 1971, to (conjectured) Fall, 1971.

Item 1 : My organization's overall plan is operable

	Fall '69 T_1			Fall '70 T_2			Spring '71 T_3			Fall '71 T_4		
	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD
Experiment (#1)	38	4.921	1.549	38	5.658	1.169	73	5.493	1.249	73	5.548	1.344
Experiment (#2)	59	4.441	1.774	60	4.723	1.616	51	4.725	1.266	52	5.019	1.350
Control (C)	65	5.631	1.376	66	5.803	1.140	61	5.590	1.189	61	5.672	1.180
Total	162			164			185			186		

TWO-WAY Anal. of Variance		T_1 & T_2		T_2 & T_3		T_3 & T_4	
		F	Signif.	F	Signif.	F	Signif.
Experiment #1 W/ Control State	Col.	5.172	.05	0.578	NS	0.523	NS
	Row	5.849	.05	1.404	NS	0.200	NS
Experiment #2 W/ Control State	Col.	28.099	.001	23.791	.001	20.818	.001
	Row	3.786	NS	2.033	NS	1.276	NS

Item 2 : The goals of this organization are articulated

	Fall '69 T_1			Fall '70 T_2			Spring '71 T_3			Fall '71 T_4		
	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD
Experiment (#1)	39	3.744	1.371	39	5.077	1.133	73	4.808	1.497	73	5.233	1.419
Experiment (#2)	60	3.800	1.592	59	4.203	1.648	52	4.096	1.376	53	4.547	1.422
Control (C)	65	4.877	1.352	65	5.231	1.222	61	4.492	1.501	61	4.787	1.529
Total	164			163			186			187		

TWO-WAY Anal. of Variance		T_1 & T_2		T_2 & T_3		T_3 & T_4	
		F	Signif.	F	Signif.	F	Signif.
Experiment #1 W/	Col.	12.379	.001	0.197	NS	4.382	.05
Control State	Row	21.268	.001	7.578	.01	3.905	.05
Experiment #2 W/	Col.	32.422	.001	14.319	.001	2.662	NS
Control State	Row	4.198	.05	5.063	.05	3.670	NS

Item 3 : Our goals are realistic and obtainable with our best efforts

	Fall '69 T_1			Fall '70 T_2			Spring '71 T_3			Fall '71 T_4		
	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD
Experiment (#1)	38	4.605	1.285	38	5.342	1.047	73	4.945	1.332	73	5.082	1.431
Experiment (#2)	60	4.233	1.588	59	4.610	1.630	51	4.392	1.297	52	4.654	1.440
Control (C)	65	5.000	1.250	66	5.379	1.092	61	4.902	1.589	61	5.098	1.502
Total	163			163			185			186		

TWO-WAY Anal. of Variance		T_1 & T_2		T_2 & T_3		T_3 & T_4	
		F	Signif.	F	Signif.	F	Signif.
Experiment #1 W/	Col.	1.627	NS	0.000	NS	0.006	NS
Control State	Row	10.882	.001	6.288	.05	0.869	NS
Experiment #2 W/	Col.	18.818	.001	11.964	.001	5.890	.05
Control State	Row	4.559	.05	3.539	NS	1.360	NS

Item #4: My organizations policy statements are clear.

	Fall '69 T_1			Fall '70 T_2			Spring '71 T_3			Fall '71 T_4		
	N	X	SD	N	X	SD	N	X	SD	N	X	SD
Experiment (#1)	38	4.579	1.734	38	5.132	1.597	71	5.239	1.439	71	5.310	1.450
Experiment (#2)	58	3.879	1.612	59	4.237	1.622	51	4.020	1.378	52	4.654	1.532
Control (C)	65	5.323	1.359	66	5.500	1.113	57	5.298	1.322	57	5.316	1.325
Total	163			163			179			180		

TWO-Way Anal. of Variance		T_1 & T_2		T_2 & T_3		T_3 & T_4	
		F	Signif.	F	Signif.	F	Signif.
Experiment #1 W/ Control State	Col.	7.472	.01	1.363	NS	0.034	NS
	Row	3.213	NS	0.066	NS	0.063	NS
Experiment #2 W/ Control State	Col.	55.276	.001	50.122	.001	26.400	.001
	Row	2.159	NS	1.365	NS	2.978	NS

Item 5 My organization's performance standards are understood.

	Fall '69 T_1			Fall '70 T_2			Spring '71 T_3			Fall '71 T_4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experiment (#1)	37	4.432	1.608	36	5.250	1.273	73	4.932	1.456	73	5.110	1.370
Experiment (#2)	59	3.712	1.733	60	4.200	1.634	52	3.442	1.434	53	4.094	1.644
Control (C)	65	5.138	1.456	66	5.424	1.302	61	4.738	1.365	61	4.902	1.411
Total	161			162			186			187		

TWO-WAY Anal. of Variance		T_1 & T_2		T_2 & T_3		T_3 & T_4	
		F	Signif.	F	Signif.	F	Signif.
Experiment #1 W/ Control State	Col.	4.589	.05	0.003	NS	1.364	NS
	Row	7.210	.01	7.440	.01	0.989	NS
Experiment #2 W/ Control State	Col.	46.653	.001	45.672	.001	29.186	.001
	Row	3.977	.05	15.005	.001	4.395	.05

Item 1: Fall, 1970, to Spring, 1971

Beginning, My organization's overall plan is operable,[18] we find a set of relationships which holds for almost all of the items; this relationship is that when E_1 is compared to the Control State for this time period (the immediate pre- and post-training period), E_1 reflects no significant effects of training and when E_2 is compared to the Control State for this period of time, significant training effects are found. (This is found by examining the row F's on the previous tables.)

E_1 and the Control were not statistically different from each other (column F). In the case of E_2, there was no significant difference between it and the Control State but there were training effects; training had the effect of stabilizing the amount of emphasis placed on this variable in organization E_2. In the Control State emphasis decreased. This can be seen in a comparison of the means of this item.

Item 1: Fall, 1969, to Fall, 1970

The condition of this variable in the past is interesting; E_1 was different from the Control State (row F) and the amount of emphasis placed over time was different (column F)--E_1 showed a marked increase in emphasis over this time period while the Control State showed only slight increase in emphasis (based on a comparison of mean scores). The same general condition as far as emphasis is concerned holds for E_2; however, E_2 was not, independent of time, different from the Control State, whereas E_1 was.

Item 1: Spring, 1971, to Fall, 1971

For this period of time, no differences were expected to exist between E_1 and the Control State either on the grounds of differential change in the extent to which the organization's goals were articulated or, holding time constant, the frequency with which goals would be articulated. The analysis of differences between E_2 and the Control was similar but with regard to changing emphasis, there was an expressed optimism in E_2 that their organizational goals would be more articulated; this produced significant differences between these two States.

Item 2: Fall, 1970, to Spring, 1971

Item 2, The goals of this organization are articulated,[19] again shows no difference in the period Fall, 1970, to Spring, 1971, in E_1 in relation to the Control which can be attributed to training. Holding the time period constant, analysis does indicate, however, that these two States were significantly different from each other. Organization E_2 when compared to the Control for the same time period, shows both differences which are attributable to training and which are attributable to differences between the States. The first of the differences is more statistically significant than the second.

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[18]

[19] Appendix A, p. xx.

Item 2: Fall, 1969, to Fall, 1970

Looking to the past, significant differences existed between the States on all possible grounds. Holding time constant, each Experimental State was significantly different from the Control State (row F). This is represented by the mean (Cf. previous table) of the Control group which was higher than E_2's mean in the Fall, 1969, and was also higher in the Fall, 1970. There was a greater increase or change in the extent to which E_2 believed its goals were articulated than in the Control State.

During the same period, all of the things said about E_2 also held for E_1 in relation to the Control group--with an even greater shift of emphasis on the extent to which goals were articulated in E_1 relative to the Control State.

Item 2: Spring, 1971, to Fall, 1971

Analysis of expected future indicated there would be no significant difference in emphasis on how integral the role of planning would be in the E_2 to Control comparison and that the States, holding time constant (row F) would not be different. Experimental State E_1 when considered in relation to the State which did not receive training showed a greater tendency to believe their organizations goals would be articulated in the future (column F), and the States were significantly different from each other (row F).

Item 3: Fall, 1970, to Spring, 1971

Item 3, Our goals are realistic and attainable with our best efforts,[20] reflected a pattern similar to the previous item. State E_1 in relation to the Control State showed no effects of training and these two States were different from each other during the period Fall, 1970, to Spring, 1971. In the second comparison, E_2 to Control, this situation is reversed with a significant training effect present and no differences between States when time is held constant.

Item 3: Fall, 1969, to Fall, 1970

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[20] Appendix A, p. xxi.

Looking to the past, organization E_1 showed no difference in tendency to believe goals were realistic and attainable over time; but, this Experimental State and the Control were different in the extent they believed this circumstance held in their organizations; the Control State indicated their goals were more realistic and attainable than they were believed to be in the Experimental State. Differences between the States was even more significant in the E_2 to Control comparison and there was a significant tendency for golas to be perceived as becoming more articulated and realistic in the Control than in E_2.

Item 3: Spring, 1971, to Fall, 1971

Shifting to the future, we find no differences in trends between E_1 and Control (column F) and no differences holding time constant (row F). In the E_2 to Control comparison, a significant change in emphasis was expected to occur in E_2; there were no differences between the States when time was held constant.

Item 4: Fall, 1970, to Spring, 1971

The next item, My organization's policy statements are clear, showed no significant differences in the E_1 comparison either over time or holding time constant. In short, no differences between the States and thus no effect of training. The E_2 comparison indicated significant differences which were attributable to training and were produced by a positive effect in State E_2; when time was held constant, no differences existed between these States.

Item 4: Fall, 1969, to Fall, 1970

The past E_1 and E_2 comparisons both showed a significant difference in the degree to which the Experimental organizations believed their organization's policy statements were clear. The tendency was for an increase in this area relative to the Control. No differences existed between the States on both the E_1 and E_2 comparisons for this period.

Item 4: Spring, 1971, to Fall, 1971

The future, Spring, 1971, to Fall, 1971, comparison for E_1 indicated no differences in the variable over time or between the States. The E_2 analysis did reflect significant differences in that the Experimental State expected to have clearer policy statements in the future and the Control expected them to stay about the same. The States, holding time constant, were not different.

Item 5: Fall, 1970, to Spring, 1971

Item 5, My organization's performance standards are understood,[21] showed no effects attributable to training in E_1 for the Fall, 1970 to Spring, 1971, period. The States were, however, different in that this Experimental State perceived their performance standards as more understood than was the case in the Control State. State E_2 evidenced training effects and proved to be different from the Control. In this case, however, the training effect was to reduce the extent to which performance standards were understood. The differences between the States was that the Control State perceived that their standards were better understood than those of the Experimental State E_2.

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[21] Appendix A, p. xxiii.

Item 5: Fall, 1969, to Fall, 1970

The Fall, 1969, to Fall, 1970 interim differences were found in both the way the variable was changing over time and the actual differences between the States for all possible comparisons. For both of the Experimental States, the tendency had been for performance standards to become more understood over time; holding time constant, both of the Experimental States described their performance standards as less well understood than did the Control State.

Item 5: Spring, 1971, to Fall, 1971

The Spring to Fall, 1971, period revealed a different pattern. In this case, there was no difference in the way the variable was expected to behave for E_1, and E_1 was not different from the Control in terms of how clear its performance standards were. The second Experimental State, E_2, indicated that performance standards were expected to become more understood, a very significant difference in relation to the Control State, and the Experimental State and the Control were different from each other in the extent to which performance standards were understood; the Control State's understanding was significantly greater than the Experimental State.

DATA SUMMARY
OPERATIONAL IMPACT OF TRAINING ON ORGANIZATIONAL PLANNING
Fall, 1970--Spring, 1971

Item	Type of Data	IMPACT OF TRAINING		
		Positive Effect	No Effect	Negative Effect
	QUESTIONNAIRE			
1	My organization's overall plan is operable	E_2	E_1	
2	The goals of this organization are articulated	E_2	E_1	
3	Our goals are realistic and attainable with our best efforts	E_2	E_1	
4	My organization's policy statements are clear	E_2	E_1	
5	My organization's performance standards are understood		E_1	E_2

For the critical time period, Fall, 1970, to Spring, 1971, organization E_1 showed no effects of training on any of the five variables. Three out of five times E_1 was significantly different from the Control State in terms of the extent to which the variable was achieved in the organization. In general, E_1 described the items as more consistently operational than did the Control State.

For State E_2, effects of training were present in all five cases. This effect was not, however, straightforward. In four cases the effect was positive and in one case it was negative. State E_2 was not significantly different from the Control three out of five times on the extent these variables were operational in the organization.

In the one year period preceding the training efforts, Fall, 1969, to Fall, 1970, State E_1 showed, four out of five times, a greater tendency for the variable to become more operational in the organization; and, in relation to the Control State for this period; holding time constant, organization E_1 was different four out of five times from the Control and in all four cases this difference was because the extent to which the four variables were seen as operational was lower in the Experimental State.

Organization E_2 showed a significant tendency for all five variables to become more operational over this time period than did the Control. Holding time constant, on three out of the five items, E_2 was different from the Control, a difference caused by the fact the variable were rated lower in the Experimental State. In the future period, Spring, 1971 to Fall, 1971, four out of five times, Experimental State E_1 was no different from the Control in terms of change in the variables; in one case there were differences which was due to the expectation that in E_1 goals of the organization would become more articulated than the Control expected them to become. And, with the exception of this same variable, there were no differences between the States on any of the five variables. In the case of the single difference, this was created by the Experimental State perceiving its goals to be more generally articulated than the Control perceived its to be. The future dimension in E_2 showed, four out of five times, significant differences from the Control in the projected operationality of the variables; in each of these four cases, the Experimental State expected to make more positive change than did the Control. Holding time constant, four out of five times, the States were not different in the extent they believed the variable was achieved in their organizations. In the one case of differences, this was due to the Control being higher on the dimension than the Experimental State; this was item 5, "My organizations performance standards are understood.".

In short, the data suggests that training had no effect in organization E_1 as measured by the five items. In E_2 there was a training effect present for all items; in one case, the effect was negative, i.e., performance standards became less understood. Historically, both of the Experimental States showed a more marked tendency to change in a positive direction than did the Control. Looking to the future (Spring, 1971 to Fall, 1971) the expectations were a rather mixed pattern; organization E_1 expected to parallel the Control and organization E_2 expected to change more than the Control but this change would not be sufficient to bring it to as high a level of achievement as the Control.

Since we place most credence on the Fall, 1970, to Spring, 1971 comparison, we believe that the training had no effect in E_1 and had generally positive effect in E_2 (the exception being the negative behavior of one variable). Throughout the data, E_2 consistently was at a lower level than either the Control or E_1 (which suggests the program was more effective because of greater need). In the Experimental organization which showed less need, the program was not effective in changing perceptions of how the organization functioned along the five dimensions.

Credibility of The Planning Process

Here, we are interested in the question of how important organizational planning is to the State Educational Agencies and what kind of role the training program played in redefining this role. Four categories from the content analysis and one item from the questionnaire will be used to explore this question.

Content categories are:

1. Establish credibility of planning.

Interview question:	What do you expect to obtain (obtained) from the AMA training?
Range of Scale Possibilities:	(1) no value to (7) maximum value
States:	Experimental States only

2. Role of planning: how integral

Interview question:	What is the role of planning in running the State's schools?
Range of Scale Possibilities:	(1) no value to (7) integral part
States:	E_1, E_2 and Control

3. Role of planning: how much is needed

Interview question:	Same as #2 above
Range of Scale Possibilities:	(1) no value--should not be used at all to (7) everything should be planned

States: E_1, E_2 and Control

4. Role of planning: emergence

Interview question: Same as #2 above

Range of Scale Possibilities: (1) still not used to (7) long standing practice

States: E_1, E_2 and Control

The questionnaire item is:

5. As I see it, planning is an integral part of running the State's schools.

Item 1 : **Establish credibility of planning.**

Fall, 1970		Spring, 1971		Fall, 1970 to Spring, 1971			
E_1 & E_2		E_1 & E_2		E_1 & E_1		E_2 & E_2	
N 7	N 8	N 8	N 11	N 7	N 8	N 8	N 11
Kruskal-Wallis One-Way Analysis of Variance							
H=1.209 Sig.=NS		H=0.615 Sig.=NS		H=0.753 Sig.=NS		H=0.493 Sig.=NS	

Item: 2 : Role of Planning: How Integral

Fall, 1970						Spring, 1971						Fall, 1970 to Spring, 1971					
E 1 & C		E 2 & C		E 1 & E 2		E 1 & C		E 2 & C		E 1 & E 2		E 1 & E 1		E 2 & E 2		C & C	
N 12	N 12	N 12	N 12	N 12	N 12	N 12	N 12	N 12	N 12	N 12	N 12	N 12	N 12	N 12	N 12	N 12	N 12
Kruskal-Wallis One-way Analysis of Variance																	
H=0.068 Sig.=NS		H=5.333 Sig.=.05		H=8.501 Sig.=.01		H=2.430 Sig.=NS		H=0.213 Sig.=NS		H=1.333 Sig.=NS		H=0.083 Sig.=NS		H=3.968 Sig.=.05		H=0.963 Sig.=NS	

Item 3 : Role of Planning: How much is needed

Fall, 1970						Spring, 1971						Fall, 1970 to Spring, 1971					
E_1 & C		E_2 & C		E_1 & E_2		E_1 & C		E_2 & C		E_1 & E_2		E_1 & E_1		E_2 & E_2		C & C	
N 12	N 12	N 12	N 12	N 12	N 12	N 12	N 12	N 12	N 12	N 12	N 12	N 12	N 12	N 12	N 12	N 12	N 12
Kruskal-Wallis One-Way Analysis of Variance																	
H=1.470		H=3.203		H=0.163		H=1.470		H=1.688		H=0.188		H=0.021		H=0.030		H=0.003	
Sig.=NS		Sig.=NS		Sig.=NS		Sig.=NS		Sig.=NS		Sig.=NS		Sig.=NS		Sig.=NS		Sig.=NS	

Item 4 : Role of Planning: Emergence

Fall, 1970						Spring, 1971						Fall, 1970 to Spring, 1971					
E_1 & C		E_2 & C		E_1 & E_2		E_1 & C		E_2 & C		E_1 & E_2		E_1 & E_1		E_2 & E_2		C & C	
N 12	N 12	N 12	N 12	N 12	N 12	N 12	N 12	N 12	N 12	N 12	N 12	N 12	N 12	N 12	N 12	N 12	N 12
Kruskal-Wallis One-Way Analysis of Variance																	
H=1.688		H=3.968		H=2.168		H=0.750		H=0.213		H=0.608		H=1.268		H=3.101		H=0.853	
Sig.=NS		Sig.=.05		Sig.=NS		Sig.=NS		Sig.=NS		Sig.=NS		Sig.=NS		Sig.=NS		Sig.=NS	

Item # 5 : As I see it, planning is an integral part of running the State's schools.

	Fall '69 T_1			Fall '70 T_2			Spring '71 T_3			Fall '71 T_4		
	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD
Experiment (#1)	39	6.282	0.999	39	6.564	0.718	73	6.342	0.961	73	6.384	0.937
Experiment (#2)	59	6.153	1.400	60	6.533	0.853	52	5.712	1.661	53	5.857	1.209
Control (C)	65	6.215	1.152	66	6.500	0.662	61	6.131	1.310	61	6.213	1.185
Total	163			165			186			187		

TWO-WAY Anal. of Variance		T_1 & T_2		T_2 & T_3		T_3 & T_4	
		F	Signif.	F	Signif.	F	Signif.
Experiment #1 W/ Control State	Col.	0.251	NS	1.156	NS	2.018	NS
	Row	4.706	.05	5.315	.05	0.210	NS
Experiment #2 W/ Control State	Col.	0.012	NS	1.650	NS	3.119	NS
	Row	6.287	.05	15.679	.001	1.069	NS

The first of these items should be regarded with caution as to its meaning due to the lack of a Control group and the consequent problem of validity of interpretation. Nevertheless, on Item 1, Establish credibility of planning,[22] there were no differences between the States, E_1 and E_2, either before training or after training and no change occurred which could be attributed to training. The program did not effect the credibility of planning.

Item 2, Role of planning: how integral,[23] due to the inclusion of a Control group, provides a more solid base to interpret effects. Analysis of this item showed that organization E_1 was not significantly different from the Control either before or after training and that no change occurred due to training. Organization E_2, unlike E_1, was different from the Control before but not after training and did show an effect of training; the difference between the States which existed before training was due to more credibility being attributed to planning in the Control than in the Experimental State; the training effect was to increase the credibility of planning in organization E_2.

Comparison of E_1 with E_2 showed significant differences between the two States before training, with greater credibility existing in E_1; there were no differences after training.

Item 3, Role of planning: how much needed,[24] was not different for either of the Experimental States in relation to the Control either prior or after training and there were no training effects. The training program had no effect on the amount of planning that top administrators felt was needed in the organization.

Item 4, Role of planning: emergence,[25] showed almost the same pattern as Item 3, with one exception. Organization E_2 saw planning as a more recent development in the organization and the Control said it was more of a long standing practice. There were no effects attributable to training for either of the Experimental States even though this difference between E_2 and Control was no longer present in the post-training period. What this means is that the amount of change that occurred in each of the organizations was not sufficient to produce a statistical difference but was sufficient to eliminate differences.

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[22] Appendix A, p. xiv.

[23] Appendix A, p. xv.

[24] Appendix A, p. xxvii.

[25] Appendix A, p. xxix.

Item 5: Fall, 1970, to Spring, 1971

Item 5, a questionnaire item, As I see it planning is an integral part of running the State's schools,[26] revealed no change which can be attributed to training in either of the experimental organizations. In terms of the extent to which planning played an integral role, there was a difference between each of the Experimental States and the Control. Organization E_1 saw planning as more integral than did the Control, and organization E_2 saw planning as less integral than the Control.

Item 5: Fall, 1969, to Fall, 1970

Turning to the past, we find no significant differences in tendency to emphasize planning in either E_1 or E_2 as compared to Control; however, both of the Experimental States were significantly different from the Control during this period in the degree planning played an integral role in the organizations.

Item 5: Spring, 1971, to Fall, 1971

Moving to the anticipated future, we find no differences between the States and no differences in expected emphasis over time.

DATA SUMMARY
CREDIBILITY OF THE PLANNING PROCESS
Fall, 1970--Spring, 1971

		IMPACT OF TRAINING		
Item	Type of Data	Positive Effect	No Effect	Negative Effect
	CONTENT			
1	Establish credibility of planning		E_1, E_2	
2	Role of planning: how integral	E_2	E_1	
3	Role of planning: how much is needed		E_1, E_2	
4	Role of planning: emergence		E_1, E_2	
	QUESTIONNAIRE			
5	As I see it, planning is an integral part of running the State's schools		E_1, E_2	

Credibility of organizational planning as viewed by top administrators was not affected by the training program; the degree to which planning played an integral role increased in E_2 as a result of training and was not effected by training in E_1. Training produced no change in the amount of planning that was perceived to be needed by top administrators in either of the Experimental States. And, except for E_2's perception that planning became an issue more recently than was the case in the Control State, there were no differences among the States either due to training or in terms of general belief as to when planning became a standard practice in the organization. This single difference was obliterated when analysis of the post-training data was made; this suggests that the top administrators in E_2 found that (based on the AMA's definition of the parameters of planning) planning had been an issue for as long as it had been in the Control State.

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[26] Appendix A, p. xxxi.

Research Data: Section II

Role Relationships and Group Standards

The following sub-headings will be utilized: (1) Leadership Climate, (2) Decision Making and (3) Management Team. The first two are related to role relationships and the third is related to group standards.

Leadership Climate

Data will be drawn from both interviews and questionnaires to examine selected aspects of the leadership exercised in the organizations. The content analysis items are:

1. Employee interpersonal skills

   Interview question: What are some of the roadblocks to organizational change?

   Range of Scale Possibilities: (1) major roadblock/always stops change to (7) weak roadblock/never stops change

   States: E_1, E_2 and Control

2. Attitude of boss toward AMA training

   Interview question: What is the attitude of your boss toward the AMA training?

   Range of Scale Possibilities: (1) no value to (7) maximum value

   States: E_1 and E_2

The questionnaire items are:

3. My manager makes it clear he is committed to the success of our projects. (Item #30)
4. My manager encourages and supports innovation. (Item #14)
5. Based on information I have received from my boss, I know if I am measuring up in my job. (Item #11)
6. Higher management's reactions to the problems that reach them are fair. (Item #33)
7. My boss has expressed belief that the American Management Association's training program will be helpful. (Item #43) This item was not contained in the questionnaire administered to the Control State.

Item 1 : Employee interpersonal skills

Fall, 1970						Spring, 1971						Fall, 1970 to Spring, 1971					
E_1 & C		E_2 & C		E_1 & E_2		E_1 & C		E_2 & C		E_1 & E_2		E_1 & E_1		E_2 & E_2		C & C	
N 4	N 4	N 7	N 4	N 4	N 8	N 6	N 3	N 6	N 3	N 6	N 6	N 4	N 6	N 7	N 6	N 4	N 3
Kruskal - Wallis One-Way Analysis of Variance																	
H =0.333 Sig.=NS		H=0.143 Sig.=NS		H=0.143 Sig.=NS		H=0.600 Sig.=NS		H=0.600 Sig.=NS		H=3.103 Sig.=NS		H=0.284 Sig.=NS		H=1.306 Sig.=NS		H=0.281 Sig.=NS	
Binomial Test of Proportions																	
Z=0.00 Sig.=NS		Z=-1.25 Sig.=NS		Z=1.25 Sig.=NS		Z=-1.30 Sig.=NS		Z=-1.30 Sig.=NS		Z=0.00 Sig.=NS		Z=0.83 Sig.=NS		Z=-0.40 Sig.=NS		Z=-0.44 Sig.=NS	

Item 2 : Attitude of boss toward AMA training program

Fall, 1970		Spring, 1970		Fall, 1970 to Spring, 1971			
E_1 & E_2		E_1 & E_2		E_1 & E_1		E_2 & E_2	
N 11	N 12	N 12	N 12	N 11	N 12	N 12	N 12
Kruskal-Wallis One-Way Analysis of Variance							
H=6.061 Sig.=.05		H=11.213 Sig.=.001		H=0.069 Sig.=NS		H=1.613 Sig.=NS	

Item # 3 : My manager makes it clear he is committed to the success of our projects.

	Fall '69 T_1			Fall '70 T_2			Spring '71 T_3			Fall '71 T_4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experiment (#1)	39	5.692	1.239	39	6.256	0.938	73	6.260	0.850	73	6.288	0.857
Experiment (#2)	60	5.850	1.102	60	6.100	0.933	52	4.846	1.539	53	5.113	1.527
Control (C)	65	5.815	1.298	66	6.030	1.007	61	5.393	1.497	61	5.492	1.468
Total	164			165			186			187		

TWO-WAY Anal. of Variance		T_1 & T_2		T_2 & T_3		T_3 & T_4	
		F	Signif.	F	Signif.	F	Signif.
Experiment #1 W/ Control State	Col.	0.100	NS	13.847	.001	32.880	.001
	Row	5.728	.05	4.645	.05	0.188	NS
Experiment #2 W/ Control State	Col.	0.142	NS	2.133	NS	5.331	.05
	Row	2.817	NS	33.424	.001	0.830	NS

Item # 4 : My manager encourages and supports innovation

	Fall '69 T_1			Fall '70 T_2			Spring '71 T_3			Fall '71 T_4		
	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD
Experiment (#1)	39	5.538	1.335	39	6.051	0.999	73	6.137	1.045	73	6.274	0.917
Experiment (#2)	60	5.650	1.200	60	5.900	1.189	52	5.135	1.534	53	5.057	1.610
Control (C)	65	5.415	1.509	66	5.712	1.274	61	4.836	1.675	61	5.000	1.653
Total	164			165			186			187		

TWO-WAY Anal. of Variance		T_1 & T_2		T_2 & T_3		T_3 & T_4	
		F	Signif.	F	Signif.	F	Signif.
Experiment #1 W/ Control State	Col.	1.500	NS	22.841	.001	61.681	.001
	Row	4.601	.05	5.304	.05	0.842	NS
Experiment #2 W/ Control State	Col.	1.589	NS	1.727	NS	0.676	NS
	Row	2.661	NS	19.668	.001	0.040	NS

Item # 5 : Based on information I have received from my boss, I know if I am measuring up in my job.

	Fall '69 T_1			Fall '70 T_2			Spring '71 T_3			Fall '71 T_4		
	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD
Experiment (#1)	39	4.974	1.347	39	5.436	1.046	73	5.342	1.387	73	5.534	1.281
Experiment (#2)	60	4.367	1.707	60	4.534	1.751	52	3.981	1.743	53	4.208	1.769
Control (C)	65	5.246	1.511	66	5.500	1.256	61	4.836	1.551	61	4.934	1.611
Total	164			165			186			187		

TWO-WAY Anal. of Variance		T_1 & T_2		T_2 & T_3		T_3 & T_4	
		F	Signif.	F	Signif.	F	Signif.
Experiment #1 W/	Col.	0.787	NS	1.519	NS	9.642	.01
Control State	Row.	3.571	NS	4.455	.05	0.663	NS
Experiment #2 W/	Col.	21.916	.001	19.848	.001	12.747	.001
Control State	Row	1.137	NS	8.848	.01	0.538	NS

Item # 6 : Higher management's reactions to the problems that reach them are fair.

	Fall '69 T_1			Fall '70 T_2			Spring '71 T_3			Fall '71 T_4		
	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD
Experiment (#1)	39	4.846	1.694	39	5.436	1.535	71	5.677	1.180	71	5.704	1.176
Experiment (#2)	60	4.833	1.199	60	4.950	1.512	49	4.673	1.420	49	4.857	1.354
Control (C)	64	5.328	1.334	65	5.492	1.002	58	5.138	1.420	59	5.237	1.343
Total	163			164			178			179		

TWO-WAY Anal. of Variance		T_1 & T_2		T_2 & T_3		T_3 & T_4	
		F	Signif.	F	Signif.	F	Signif.
Experiment #1 W/ Control State	Col.	1.907	NS	2.005	NS	9.980	.01
	Row	3.739	NS	0.113	NS	0.161	NS
Experiment #2 W/ Control State	Col.	9.234	.01	8.072	.01	4.962	.05
	Row	0.677	NS	3.170	NS	0.557	NS

Item # 7 : My boss has expressed belief that the American Management Association's training program will be helpful.

	Fall '70 T_2			Spring '71 T_3		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experiment (#1)	38	4.737	1.996	72	5.764	1.379
Experiment (#2)	60	4.367	2.099	52	4.423	1.649
Total	98			124		

TWO-WAY Anal. of Variance		T_2 & T_3	
		F	Signif.
Experiment #1 W/ Experiment #2	Col.	12.315	.001
	Row	4.938	.05

One of the potential raodblocks to organizational change is interpersonal skills; material on this area was produced by Item 1.[27] Statistical analysis of this item revealed that organization E1 and E2 were not different from the Control State either before or after training, and that no changes occurred in either of the experimental States as a result of training. The training program had no effect as far as this variable is concerned.

Item 2, the other content category, was developed from responses to the question, "What is the attitude of your boss toward the AMA training program?".[28] Analysis indicated that the two experimental States (the question was not asked in the Control State) were different both before and after training; the training did not produce significant changes within either of the States. The differences both before and after were due to a more positive attitude in E1 than in E2.

Item #3, "My manager makes it clear he is committed to the success of our projects,"[29] is the first of five questionnaire items included under this section.

Item 3: Fall, 1970, to Spring, 1971

During the immediate pre-post training period, organization E1 reflected significant change which can be attributed to training. In E1 the effect was to increase managers' commitment. In organization E2 there was no change in the frequency with which managers expressed commitment to the success of projects. Both of the experimental States were different (independent of time) from the Control on the grounds of how much commitment was expressed by managers. Managers in E1 expressed significantly more commitment than the Control State's managers and managers in E2 expressed significantly less commitment.

Item 3: Fall, 1969, to Fall, 1970

In the year preceding training, the amount of commitment expressed to projects did not change over time in either organization E1 or E2; however, the frequency with which commitment was expressed was greater in E1 than in the Control (independent of change on this variable); no difference existed between E2 and the Control for this period on this basis.

Item 3: Spring, 1971, to Fall, 1971

The post-training analysis showed that both of the experimental States were comparable to the Control when time was held constant but when viewed in terms of expected changes in commitment, both of the experimental States were different from the Control. Both State E1 and E2 expected their managers to express more commitment to projects as time passed. This tendency was greater in E1 than E2.

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[27] Appendix A, p. xxxii
[28] Appendix A, p. xxxiv
[29] Appendix A, p. xxxv

Item 4: Fall, 1970, to Spring, 1971

Item 4, "My manager encourages and supports innovation,"[30] produced no effects attributable to training in E2 during the pre- post-training period but did produce very significant effects in E1. Both of the States were significanly different from the Control State in terms of the amount of encouragement and support given to innovation; support in these terms from managers in E1 was greater than that given in the Control; support in E2 was less than that given in the Control.

Item 4: Fall, 1969, to Fall, 1970

Moving to the year preceding training, we find that neither E1 nor E2 showed a tendency for change to occur in the amount of encouragement and support given to innovation and that independent of changing emphasis and simply in amount of emphasis, organization E2 was not different from the Control. However, organization E1 was significantly different from the Control in that E1's managers expressed more support.

Item 4: Spring, 1971, to Fall, 1971

An examination of the period following training indicated organization E1 expected to achieve a very significant increase in amount of encouragement and support given by managers to projects. Organization E2 reflected no anticipated change which was significantly different from the Control. Holding time constant and looking at the amount of emphasis given to the area, there were no significant differences between either of the Experimental States and the Control.

Item 5: Fall, 1970, to Spring, 1971

Item 5, "Based on information I have received from my boss, I know if I am measuring up on my job,"[31] showed no effect of training in the case of E1 and a significant training effect in E2. This latter effect was positive. In terms of the amount of job-related feedback given by the boss, both E1 and E2 were different from the Control State. Organization E1 was different in that more feedback was given; in organization E2, less feedback was given.

Item 5: Fall, 1969, to Fall, 1970

Analysis of the past indicated that neither of the experimental States were significantly different from the control in the amount of feedback given. There was a tendency in E2 to see managers giving more feedback as time passed which was different from the situation in the Control. Organization E1 was not changing in this regard in a manner different from the Control.

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[30] Appendix A, p. xxxvi

[31] Appendix A, p. xxxvii

Item 5: Spring, 1971, to Fall, 1971

The future looked different to both of the Experimental States than it did to the Control. Both organization, E1 and E2, expected managers to provide a higher volume of feedback on job performance as the future unfolded. The amount of feedback, independent of time, was significantly greater in E1 and significantly less in E2 than in the Control.

Item 6: Fall, 1970, to Spring, 1970

When "Higher management's reaction to the problems that reach them are fair,"[32] is assessed for the pre-post training period, no effect of training was achieved in State E1 and in E2 there was a training effect; this effect was positive. E2 reflected a growing tendency to believe higher management's reactions were fair than did the Control State. Neither E1 or E2 were different from the Control in strength of belief that top management's reactions were fair.

Item 6: Fall, 1969, to Fall, 1970

Turning to the past, there were no significant differences between the Experimental States and the Control in the strength of belief that management's reactions were fair and, in the case of E1 there was no tendency for change that was different from the Control. There was a significant tendency for E2 to move toward greater confidence in the reactions of top management than was true of the Control.

Item 6: Spring, 1970, to Fall, 1971

Looking toward the future, neither of the Experimental States were different from the Control in strength of belief in top management's reactions and both of the Experimental States expected greater change in beliefs than the Control. This change was to be one of increasing confidence in top management's reactions.

Item 7: Fall, 1970, to Spring, 1971

The last item, "My boss has expressed belief that the American Management Association's trining program will be helpful,"[33] was not administered in the questionnaire given to the control state. Therefore, interpretation of this item is somewhat less straightforward. The analysis is limited to a comparison of the two Experimental States during the Fall, 1970, to Spring, 1971, period. Analysis indicated that the Experimental States were different in both the extent to which positive attitudes were held toward the AMA by managers and the amount of emphasis given.

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[32] Appendix A, p. xxxviii

[33] Appendix A, p. xxxix

The first difference was due to a significantly greater amount of belief being expressed by the managers of organization E1; the second difference was due to E2's managers increasing the frequency with which they expressed positive attitudes toward the training that had been received. Since E1 remained unchanged and E2 did not, we interpret this to mean there was a training effect in E2 and not in E1.

DATA SUMMARY

LEADERSHIP CLIMATE

Fall, 1970--Spring, 1971

Item	Type of Data	IMPACT OF TRAINING Positive Effect	 No Effect	 Negative Effect
	Content			
1.	Employee interpersonal skills		E_1 E_2	
2.	Attitude of boss toward AMA training		E_1 E_2	
	Questionnaire			
3.	My manager makes it clear he is committed to the success of our projects.	E_1	E_1 E_2	
4.	My manager encourages and supports innovation.	E_1	E_2	
5.	Based on information I have received from my boss, I know if I am measuring up in my job.	E_2	E_1	
6.	Higher management's reactions to the problems that reach them are fair.	E_2	E_1	
7.	My boss has expressed belief that the American Management Association's training program will be helpful.	E_1	E_2	

Based on the content items, we found the training program had no effect on attitudes of the top twelve administrators in either of the Experimental States toward (1) changing the extent to which interpersonal skills were seen as a roadblock to change or (2) the strength of positive belief these administrators had toward the helpfulness of the AMA program. The program had the effect of increasing managerial commitment to the success of projects in one of the States, E1, and not in the other. It also had the effect of increasing encouragement and support for innovation in E1 and produced no change in E2.

This last pattern was reversed on the item focused on feedback about job performance; organization E2 showed a significant, positive training effect--an increase in feedback--and organization E1 showed no effects of the training. Similar effects were produced with regard to belief that higher management's reactions were fair. Experimental State E2 showed a significant tendency to increase confidence in top management reaction; there was no change in E1. Analysis of the last questionnaire item indicated training had the effect of increasing the extent managers of organization E2 felt the AMA program was helpful; no change occurred in organization E1.

In general, organization E1 placed greater emphasis on each of the variables than did organization E2. In other words, one organization was consistently higher on the measurements and one was consistently lower.

Decision Making

Two questionnaire items and two content categories will provide the data base for an analysis of decision making. The content items are:

1. Involvement in decision making:

   Interview question: How are major decisions made?

   Range of scale possibilities: (1) no participation/no discussion invited, to (7) maximum participation throughout the SED.

   States: E1, E2, and control.

2. Quality of Decision Making

   Interview question: Same as #1 above.

   Range scale of possibilities: (1) never effective to (7) highly effective.

   States: E1, E2, and Control.

The questionnaire items are:

3. The people I work with participate appropriately in setting the goals of our work. (Item #23)
4. I am appropriately involved in decisions affecting my work. (Item #6)

Item 1 : Involvement in decision making

Fall, 1970						Spring, 1971						Fall, 1970 to Spring, 1971					
E_1 & C		E_2 & C		E_1 & E_2		E_1 & C		E_2 & C		E_1 & E_2		E_1 & E_1		E_2 & E_2		C & C	
N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
12	12	12	12	12	12	11	11	12	11	11	12	12	11	12	12	12	11

Kruskal-Wallis One-Way Analysis of Variance

H= 4.813 Sig.=.05	H= 1.470 Sig.= NS	H= 1.333 Sig.= NS	H= 8.928 Sig.=.01	H= 2.367 Sig.= NS	H= 5.186 Sig.=.05	H= 0.186 Sig.= NS	H= 0.853 Sig.= NS	H= 1.226 Sig.= NS

Binomial Test of Proportions

Z= 0.00 Sig.= NS	Z= 0.00 Sig.= NS	Z= 0.00 Sig.= NS	Z= 0.00 Sig.= NS	Z= -0.75 Sig.= NS	Z= 0.75 Sig.= NS	Z= -0.75 Sig.= NS	Z= 0.00 Sig.= NS	Z= -0.75 Sig.= NS

Item 2 : Quality of decision making

Fall, 1970						Spring, 1971						Fall, 1970 to Spring, 1971					
E_1 & C		E_2 & C		E_1 & E_2		E_1 & C		E_2 & C		E_1 & E_2		E_1 & E_1		E_2 & E_2		C & C	
N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
12	12	12	12	12	12	11	11	12	11	11	12	12	11	12	12	12	11

Kruskal-Wallis One-Way Analysis of Variance

H= 1.141 Sig.= NS	H= 6.901 Sig.=.01	H= 1.763 Sig.= NS	H= 1.246 Sig.= NS	H= 9.660 Sig.=.01	H= 5.327 Sig.=.05	H= 0.307 Sig.= NS	H= 0.120 Sig.= NS	H= 0.274 Sig.= NS

Binomial Test of Proportions

Z= 0.00 Sig.= NS	Z= 0.00 Sig.= NS	Z= 0.00 Sig.= NS	Z= 0.00 Sig.= NS	Z= -0.75 Sig.= NS	Z= 0.75 Sig.= NS	Z= -0.75 Sig.= NS	Z= 0.00 Sig.= NS	Z= -0.75 Sig.= NS

Item # 3 : The people I work with participate appropriately in setting the goals of our work.

	Fall '69 T_1			Fall '70 T_2			Spring '71 T_3			Fall '71 T_4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experiment (#1)	39	4.821	1.295	39	5.769	0.931	72	5.375	1.305	72	5.542	1.266
Experiment (#2)	60	4.500	1.384	60	5.167	1.460	51	4.804	1.342	52	5.154	1.334
Control (C)	65	5.061	1.519	66	5.394	1.288	60	4.817	1.568	60	5.083	1.555
Total	164			165			183			184		

TWO-WAY Anal. of Variance		T_1 & T_2		T_2 & T_3		T_3 & T_4	
		F	Signif.	F	Signif.	F	Signif.
Experiment #1 W/ Control State	Col.	0.128	NS	7.002	.01	8.420	.01
	Row	11.677	.001	7.582	.01	1.531	NS
Experiment #2 W/ Control State	Col.	6.181	.05	0.844	NS	0.022	NS
	Row	6.325	.05	5.154	.05	2.463	NS

Item # 4 : I am appropriately involved in decisions affecting my work.

	Fall '69 T_1			Fall '70 T_2			Spring '71 T_3			Fall '71 T_4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experiment (#1)	39	5.103	1.252	39	5.949	0.887	73	5.699	1.298	73	5.785	1.201
Experiment (#2)	60	5.500	1.408	59	5.661	1.385	52	4.808	1.456	53	4.925	1.439
Control (C)	65	5.492	1.437	66	5.879	1.117	61	5.082	1.452	61	5.246	1.479
Total	164			164			186			187		

TWO-WAY Anal. of Variance		T_1 & T_2		T_2 & T_3		T_3 & T_4	
		F	Signif.	F	Signif.	F	Signif.
Experiment #1 W/ Control State	Col.	0.846	NS	4.355	.05	12.327	.001
	Row	12.574	.001	10.125	.01	0.613	NS
Experiment #2 W/ Control State	Col.	0.383	NS	1.959	NS	2.356	NS
	Row	2.604	NS	22.038	.001	0.524	NS

Analysis of Item 1 revealed the training program had no effect on the extent top administrator's felt involved in major organizational decisions;[34] neither of the States, E1 or E2, showed any change during the period Fall, 1970, to Spring, 1971. E1 was significantly different from the Control State both in the Fall and the Spring; both times this difference was due to administrators in E1 feeling more involved in decisions than their counterparts in the Control. And, due to the same reason, E1 was different from E2 in the post-training period.

Item 2, quality of decision making,[35] also showed no effects that could be attributed to training in either of the Experimental States. The program neither increased nor decreased the perceived effectiveness of decision making for the top twelve administrators. There were statistical differences between E2 and the Control in both the Fall and Spring; these differences were generated because the Control State perceived a higher quality of decision making than did organization E2.

Organizations E1 and E2 were significantly different in the Spring of 1971; this difference was caused by managers in E1 attributing greater effectiveness to their organizational decisions than E2's managers attributed to theirs.

In short, the program had no effect on the quality or effectiveness of decision making in the Experimental States.

Item 3: Fall, 1970, to Spring, 1971

Item 3, The people I work with participate appropriately in setting the goals of our work,[36] for the immediate pre=post training period, indicated mixed effects. Training had the effect of increasing participation in decision making in E1 and had no effect in E2. Both of the Experimental organizations were different from the Control in the amount of participation that was available in the organization. There was greater participation in E1 than in the Control State and less participation in E2.

Item 3: Fall, 1969, to Fall, 1970

In the past, there was a trend for increasing participation in decision making in organization E2 and no such trend in E1. Both of the Experimental States were different from the Control. Organization E1 had more participation in decision making than the Control and organization E2 had less.

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[34] Appendix A, p. xl

[35] Appendix A, p. xlii

[36] Appendix A, p. xliv

Item 3: Spring, 1971, to Fall, 1971

Moving to the future, we find that in E1 there is a projected trend of greater involvement in decision making and there is no such trend in E2. There were no differences between the Experimental States and the Control during this projected period as to the amount of participation expected to exist in the organization.

Item 4: Fall, 1970, to Spring, 1971

The last variable, I am appropriately involved in decisions affecting my work,[37] reflected the same relationships as the previous item. There was a significant increase, a training effect, in the way individuals were involved in decisions in E1; training had no effect in E2. Experimental organization E1 was different from the Control in the amount of involvement individual's felt they had in decisions affecting their work; greater involvement existed in the Experimental States. Organization E2 was also different from the Control; this difference was one of less involvement.

Item 4: Fall, 1969, to Fall, 1970

During this period there was no change of either greater or lesser involvement present in either E1 or E2. Organization E1 allowed significantly more individual participation in decisions affecting jobs than the Control. No differences existed between E2 and the Control.

Item 4: Spring, 1971, to Fall, 1971

Analysis of the expected future revealed a pattern of relationships exactly like the past. Only organization E1 showed a projected greater involvement in decisions; E2 was no different from the Control in projected involvement and when time was held constant, neither E1 or E2 were different than the Control.

Summary of Findings

The following table portrays the several kinds of impacts the training had on decision making in organizations E1 and E2.

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[37] Appendix A, p. xlv

DATA SUMMARY

DECISION MAKING

Fall, 1970, -Spring, 1971

Item	Type of Data	IMPACT OF TRAINING Positive Effect	No Effect	Negative Effect
	Content			
1.	Involvement in decision making.		E_1 E_2	
2	Quality of decision making		E_1 E_2	
	Questionnaire			
3.	The people I work with participate appropriately in setting the goals of our work	E_1	E_2	
4	I am appropriately involved in decisions affecting my work	E_1	E_2	

Analysis of the interview material obtained from the top twelve administrators showed no effect of training when it came to involvement in major organizational decisions or effectiveness of decision making. Analysis of the two questionnaire items for the same period, Fall, 1970, to Spring, 1971, indicated mixed training effects. Training increased the amount of participation individuals believed others had in setting work goals in organization E1 and had no effect in E2. The last questionnaire item reflected the same pattern. Training increased the extent individuals in E1 felt they were appropriately involved in decisions affecting their work and had no effect in E2.

Management Team

Six variables will be utilized, four content categories and two questionnaire items. These variables are intended to provide a general picture of team or group efforts within the organization and are not keyed to a specific work unit. In other words, the material from the questionnaire will aggregate information about a number of work groups in the organization; the content material will address only the top twelve administrators' view.

The content categories are:

1. Promote cooperative teamwork

   Interview question: What do you expect to obtain (obtained) from the AMA training?

   Range of Scale Possibilities: (1) no value, to (7) maximum value

   States: E1 and E2

2. Amount of cooperative teamwork present.

   Interview question: What are some of the roadblocks to organizational change?

   Range of Scale Possibilities: (1) major roadblocks/always stops change, to (7) weak roadblock/seldom stops change.

   States: E1, E2 and Control

3. Degree to which people in organization will support change.

   Interview question: Same as #2 above.

   Range of Scale Possibilities: Same as #2 above.

   States: E1, E2, and Control

4. Organization reacts to problems rather than anticipates and deals with problems.

   Interview question: Same as #2 above.

   Range of Scale Possibilities: Same as #2 above.

   States: E1, E2 and Control

Questionnaire items are:

5. My work group understands what we are trying to achieve. (Item #26)

6. My group works hard to achieve its goals. (Item 12)

Item 1 : Promote cooperative teamwork

Fall, 1970		Spring, 1971		Fall, 1970 to Spring, 1971			
E_1 & E_2		E_1 & E_2		E_1 & E_1		E_2 & E_2	
N	N	N	N	N	N	N	N
8	7	11	10	8	11	7	10

Kruskal-Wallis One-Way Analysis of Variance

H= 1.477 Sig.= NS	H= 5.565 Sig.=.05	H= 0.015 Sig.= NS	H= 2.002 Sig.= NS

Item 2 : Amount of cooperative teamwork present

Fall, 1970						Spring, 1971						Fall, 1970 to Spring, 1971					
E_1 & C		E_2 & C		E_1 & E_2		E_1 & C		E_2 & C		E_1 & I_2		E_1 & E_1		E_2 & E_2		C & C	
N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
7	5	8	5	7	8	11	7	10	7	11	10	7	11	8	10	5	7
Kruskal-Wallis One-Way Analysis of Variance																	
H= 0.059 Sig.= NS		H= 0.771 Sig.= NS		H= 1.929 Sig.= NS		H= 0.051 Sig.= NS		H= 0.153 Sig.= NS		H= 0.011 Sig.= NS		H= 0.205 Sig.= NS		H= 1.137 Sig.= NS		H= 0.106 Sig.= NS	
Binomial Test of Proportions																	
Z= -0.81 Sig.= NS		Z= -1.25 Sig.= NS		Z= 0.41 Sig.= NS		Z= -2.03 Sig.= NS		Z= -1.37 Sig.= NS		Z= -0.62 Sig.= NS		Z= 2.03 Sig.= NS		Z= 0.94 Sig.= NS		Z= 0.81 Sig.= NS	

Item 3 : Degree to which persons within organization will support change.

Fall, 1970						Spring, 1971						Fall, 1970 to Spring, 1971					
E_1 & C		E_2 & C		E_1 & E_2		E_1 & C		E_2 & C		E_1 & I_2		E_1 & E_1		E_2 & E_2		C & C	
N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
8	7	12	7	8	12	11	8	7	8	11	7	8	11	12	7	7	8

Kruskal-Wallis One-Way Analysis of Variance

H= 0.013 Sig.= NS	H= 0.016 Sig.= NS	H= 0.024 Sig.= NS	H= 0.084 Sig.= NS	H= 0.084 Sig.= NS	H= 0.740 Sig.= NS	H= 0.084 Sig.= NS	H= 0.029 Sig.= NS	H= 0.013 Sig.= NS

Binomial Test of Proportions

Z= -0.41 Sig.= NS	Z= -2.03 Sig.= NS	Z= 2.41 Sig.=.05	Z= -1.58 Sig.= NS	Z= 0.41 Sig.= NS	Z= -2.03 Sig.= NS	Z= 1.58 Sig.= NS	Z= -2.88 Sig.=.01	Z= 0.41 Sig.= NS

Item 4 : Organization reacts to problems rather than anticipates and deals with problems.

Fall, 1970						Spring, 1971						Fall, 1970 to Spring, 1971					
E_1 & C		E_2 & C		E_1 & E_2		E_1 & C		E_2 & C		E_1 & E_2		E_1 & E_1		E_2 & E_2		C & C	
N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
6	4	11	4	6	11	6	5	7	5	6	7	6	6	11	7	4	5

Kruskal-Wallis One-Way Analysis of Variance

H= 0.182 Sig.= NS	H= 1.538 Sig.= NS	H= 0.495 Sig.= NS	H= 6.075 Sig.=.05	H= 1.906 Sig.= NS	H= 2.250 Sig.= NS	H= 1.853 Sig.= NS	H= 0.525 Sig.= NS	H= 2.940 Sig.= NS

Binomial Test of Proportions

Z= 0.83 Sig.= NS	Z= -3.69 Sig.=.01	Z= 2.54 Sig.=.05	Z= -0.40 Sig.= NS	Z= -0.81 Sig.= NS	Z= 0.40 Sig.= NS	Z= 0.00 Sig.= NS	Z= -2.03 Sig.= NS	Z= 0.41 Sig.= NS

Item # 5 : My work group understands what we are trying to achieve.

	Fall '69 T_1			Fall '70 T_2			Spring '71 T_3			Fall '71 T_4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experiment (#1)	39	4.718	1.450	39	5.667	0.898	73	5.562	0.928	73	5.849	0.861
Experiment (#2)	60	4.867	1.171	60	5.317	1.172	49	5.143	1.208	50	5.420	1.213
Control (C)	65	5.477	1.359	66	5.727	1.075	61	5.164	1.306	61	5.426	1.271
Total	164			165			183			184		

TWO-WAY Anal. of Variance		T_1 & T_2		T_2 & T_3		T_3 & T_4	
		F	Signif.	F	Signif.	F	Signif.
Experiment #1 W/ Control State	Col.	5.539	.05	1.395	NS	9.394	.01
	Row	11.855	.01	5.483	.05	4.217	.05
Experiment #2 W/ Control State	Col.	11.346	.001	1.918	NS	0.006	NS
	Row	5.340	.05	5.594	.05	2.527	NS

Item # 6 : My group works hard to achieve its goals.

	Fall '69 T_1			Fall '70 T_2			Spring '71 T_3			Fall '71 T_4		
	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD
Experiment (#1)	39	5.410	1.044	39	6.128	0.656	73	5.932	0.855	73	6.027	0.897
Experiment (#2)	60	5.167	1.404	60	5.634	1.149	52	5.538	1.019	53	5.642	1.002
Control (C)	65	5.877	1.281	66	6.091	0.956	60	5.600	1.417	60	5.800	1.246
Total	164			165			185			186		

TWO-WAY Anal. of Variance		T_1 & T_2		T_2 & T_3		T_3 & T_4	
		F	Signif.	F	Signif.	F	Signif.
Experiment #1 W/	Col.	2.078	NS	1.812	NS	4.203	.05
Control State	Row	9.790	.01	6.298	.05	1.178	NS
Experiment #2 W/	Col.	14.702	.001	3.016	NS	0.475	NS
Control State	Row	4.994	.05	3.841	.05	0.902	NS

Promote cooperative teamwork,[38] item 1, which was a content category applied only to organization E1 and E2 showed no significant change in either of the Experimental States for the period Fall, 1970, to Spring, 1971. And there were no differences between the States before training. In the post-training period, there was a difference between E1 and E2; this difference was due to the E1 group indicating the program promoted cooperative teamwork more than did the group in E2. Since there was no difference in either of the States between what the top twelve expected to obtain in this area from the AMA training and what they said they obtained, the program met their expectations.

The second content category, amount of cooperative team work present,[39] one of the roadblocks to organizational change categories, showed no change in either E1 or E2 in relation to the Control group. And there were no differences between the Experimental states and the Control either before or after training. In short, the training had no effect on the degree to which it was felt that lack of cooperative teamwork was a roadblock to organizational change.

The third content category, degree to which individuals in the organization will support change,[40] was not affected by the training program. Neither of the Experimental States were different from the Control prior to or after training; awareness of this area as an issue was different in organization E1 than it was in E2. This difference was manifest by more people being aware of this as an issue in E2 prior to training than was the case in E1. There were no differences in awareness following training. Finally, the training program had no effect on awareness in E1 and had the effect of decreasing awareness of this roadblock in E2.

The fourth item, organization reacts to problems rather than anticipates and deal with problems,[41] also a category under the general question of roadblocks to change, was not affected by the training program in either of the Experimental States. Neither of the Experimental States was different from the Control State in amount of emphasis given to this area prior to training; in the post-training period, the Control group placed more emphasis on this as a problem than did E1. There were no differences between the Control and E2 in this regard.

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[38] Appendix A, p. xlvi
[39] Appendix A, p. xlvii
[40] Appendix A, p. xlix
[41] Appendix A, p. li

Awareness of this area was significantly different among the top administrators of E2 and the Control and between the E2 and E1 during the pre-training period. Administrators in E2 were generally less aware of this as a problem in E2 than was the case in the Control State and were also more aware than were the administrators in E1. Following training there was no difference in awareness between any of the States.

Item 5: Fall, 1970, to Spring, 1971

Item 5, a questionnaire item, my work group understands what we are trying to achieve,[42] reflected no effects attributable to training for either of the Experimental States during the Fall, 1970, to Spring, 1971, time period. Both of the Experimental States were different from the Control in the amount of emphasis given to the item, however. Significantly greater understanding existed in E1 than in the Control and significantly less understanding existed in E2 than in relation to the Control.

Item 5: Fall, 1969, to Fall, 1970

Analysis of the past showed that the Experimental States were different from the Control in terms of both the amount of change or tendency to change (column F's) and in terms of emphasis placed on the variable in each of the States (row F's). Both of the Experimental States showed a greater tendency for people to believe that their work group understood what they were trying to achieve than was the case in the Control State. In terms of emphasis placed on this area, the Control State indicated that greater understanding was achieved relative to organizations E1 and E2.

Item 5: Spring, 1971, to Fall, 1971

The future period, Spring, 1971, to Fall, 1971, indicated significant change was expected to occur in organization E1 relative to the Control group; this change was expected to be in a positive direction, or, in other words, to increase understanding. Organization E2 did not show an expected rate of change which was different than that expected in the Control. And, in terms of amount of emphasis or achievement of understanding in each State, there was a significant difference between E1 and the Control; this difference was one of greater understanding in the experimental organization. There were no significant differences between E2 and the Control group.

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[42] Appendix A, p. liii

Item 6: Fall, 1970, to Spring, 1971

Item 6, my group works hard to achieve its goals,[43] showed no effect of training in either of the Experimental States. In terms of how hard the groups were described as working, there were differences between both E1 and E2 in relation to the Control. Organization E1 indicated its groups worked harder than the Control did; E2's work group described itself as working less hard than the Control group's description of itself.

Item 6: Fall, 1969, to Fall, 1970

The period Fall, 1969, to Fall, 1970, showed that E1 was not different from the Control in the amount of change that occurred during the past; organization E2 was different from the Control; the tendency to increase the extent to which the Control's organization's work groups saw themselves working harder was greater than in E2. Both of the experimental States were different from the Control in the overall degree to which each emphasized how hard its groups worked. Both Experimental organizations indicated that their groups did not work as hard as did the groups in the Control State.

DATA SUMMARY

MANAGEMENT TEAM

Fall, 1970--Spring, 1971

IMPACT OF TRAINING

Item	Type of Data	Positive Effect	No Effect	Negative Effect
	Content			
1.	Promote cooperative teamwork		E_1 E_2	
2.	Amount of Cooperative teamwork present		E_1 E_2	
3.	Degree to which people in the organization will support change		E_1 E_2	
4.	Organization reacts to problems rather than anticipates and deals with problems		E_1 E_2	
	Questionnaire			
5.	My work group understands what we are trying to achieve.		E_1 E_2	
6.	My group works hard to achieve its goals.		E_1 E_2	

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[43] Appendix A, p. liv

On all four content categories--two related to cooperative teamwork, one related to support for change, and the last to problem orientation--there was no effect attributable to the training program. In terms of the two questionnaire items, there also was no effect of training on either the frequency with which work groups understood what they were trying to achieve or frequency with which they saw themselves working hard to achieve their goals.

OVERALL SUMMARY AND CONCLUSIONS

Before the overall implications and overall research findings are portrayed, a summary review and discussion of the general design of the training program will be provided. These considerations form the basis for overall interpretation of the data and are the context to which the research findings are keyed. Brief comments will be made here about two areas: (1) the staging of the program and (2) the way the program was conducted. Events which occured as the program was implemented and have a bearing on the research findings will be discussed when the data is interpreted.

Staging of the Program

We define the term staging as the different program components, who they were administered to an when they were administered.[1]

We discussed each of the three programs, the Management Course for Presidents (hereafter MCP), the Top Management Briefing (hereafter TMB) and the Educational Planning Process (hereafter EPP). Generally speaking, the format of the MCP was similar in design and content to the TMB. Both programs were oriented to professionalizing management and organizational planning. The first of these was attended only by the State Superintendent and the second was attended by the top twenty-four administrators (including the Superintendent) from the State Educational Agency.[2] The third program, the EPP, was attended by organizational families: a group composed of organizational superiors and subordinates who work together regularly. The first group of twelve top administrators who attemded the program were the State Superintendent and his ~~imm~~ immediate organizational subordinates; the second group was led by the person identified as having chief responsibility for delivery of program services to the Local Educational Agencies.

All the people in the first group attended the TMB prior to the EPP program and a large proportion of the second group also had attended the TMB prior to undertaking the EPP.

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[1] Cf., Chart on p. 3

[2] Only the Superintendent from Organization E2 attended the MCP. Cf., p. 7

Top Management Briefing and Educational Planning Process: Change Strategies

Earlier in the text, three types of attitude change were discussed--compliance, identification, and internalization. Attitude change based on compliance involves doing or saying what one is expected to say when a particular situation is presented. Like compliance, attitude change based on identification also requires an external stimulus before the acquired attitude is acquired by the person; this is normally related to exposure to a person whose social role, behavior, or mannerisms are attractive. The third type of change is internalization; unlike the other two, attitudinal change which involves internalization is incorporated into the person's value structure and does not depend upon external support for activation.

The way the input of the training was controlled has an important bearing upon the type of change which will be likely to occur. Analysis of the MCP and the TMB indicated considerable similarity of design. Since the first of these was only attended by the Superintendent, we will turn to the second program and point out the way the learning process was expected to occur within the formal program operating time. The matrix developed to provide this data indicates that for approximately 80% of the program time the training input was controlled by the AMA lecturer who was sharing concepts, experience, etc., with the trainees. Approximately 12.6% of the program was devoted to general discussion[3] and 7.4% was allocated to small group discussion.[4] Input in the general discussions was controlled by both the AMA representative who led the discussions and the trainees.[4]

Since both change based on compliance and change based on identification are tied to external factors and since the largest proportion of the program time was allotted to lectures, the primary vehicle for attitudinal change was the compliance and identification of the trainees with the concepts, experiences, and values of the lecturers.

This strategy depends quite heavily upon the quality of the information which was inputed to the client and the way the lecturer made his presentation.[5] This general process has been called an informational method of change.

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[3] Considered solely from the standpoint of amount of time each person could possibly interact with the trainer in a situation where all program participants are present, the amount of "air time" available to each person is considerable less than is the case in small group discussions.

[4] Cf. p. 9.

[5] It is the opinion of the field researcher that the lectures were, almost without exception, extremely well-executed professional presentations.

Techniques relying primarily upon information giving are effective in ambiguous situations, where lack of information is the obstacle to appropriate performance.[6]

The second major program experience was the Educational Planning Process. The change strategy employed in this program was somewhat different from the TMB. Unlike the previous program, where the input was almost entirely controlled by sources external to the trainee, the EPP design involved a mutuality of input control.[7]

The boundaries of legitimate discourse within this program was controlled by the AMA through its several steps in organizational planning and definitions and actions which were given to these steps. Input within these boundaries was a function of the client group and the particular problems and prospects their organization faced. The role of the trainer was to clarify the boundries of legitimate discourse, keep the client group oriented to the problem of organizational planning, insure that each of the steps in the planning process were accomplished as fully as possible, and attempt to maximize the extent to which interpersonal discourse remained at the level of rational dialogue and exchange of opinion.

Given this design, the primary processes of attitudinal change would again be compliance and identification. These processes are defined somewhat differently in this context than they were in the TMB. Compliance is tied to the fact that the boundries of discourse were defined by the AMA's conceptualization of effective organizational planning. Identification processes were evoked through the interaction of the members of the client group with each other. Changed attitudes which are a result of this interaction can be expected to be forthcoming whenever the role relationships upon which the identification is based are present.[8]

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[6] Daniel Katz and Robert Kahn, The Social Psychology of Organizations (New York: John Wiley, 1966), p. 393

[7] Cf., pp 14-15

[8] Since the role of trainers (as perceived by the field researcher who observed segments of all but one of the EPP programs given to top administrators from the State Educational Agency) was not one which focused on the process level of the group's behavior, change through internalization is not considered to be a direct intention of the training design. Each of the State Offices had a different trainer and each trainer's style or way of interviewing was somewhat different. Neither of the trainers overtly drew attention to emotional factors which were affecting the group's behavior and both kept their interventions to improving the quality of logical discourse when the group began to falter. Attention was focused only on the logic of discourse and the emotions which supported the discourse were not attended to. Since the possibility of internalization is optimized when both logical discourse and emotions are considered, we do not believe internalization is likely to be a major source of attitude change during the TMB.

Since all of the participants in each of the EPP programs were members of a specific organizational "family," an intact group as defined by the formal organization and composed of organizational superiors and his subordinates,[9] changed attitudes are likely to be frequently evoked in the organization.

This program is also the recipient of whatever change occured in the TMB. Because of these considerations and because the program was based on two one week training sessions separated by a significant amount of time during which the participants returned to their organization to continue pursuing events and processes initiated by the first week of training, we consider this to be the most potent force for organizational change. This force is composed of two elements: 1) individual awareness/knowledge, and 2) role relationships and group standards.

Overall Summary and Interpretation of Findings

Following the pattern of the two general headings in the text, we will begin with a discussion of the variables included under the heading Organizational Planning Process. The heading contained 4 sub-headings and a total of twenty-two research variables.

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[9] Cf. p. 35.

SUMMARY OF RESEARCH FINDINGS

ORGANIZATIONAL PLANNING PROCESS

Fall, 1970--Spring, 1971

DEFINITION OF THE MISSION OF THE ORGANIZATION	IMPACT OF TRAINING		
Item Type of Data	Positive Effect	No Effect	Negative Effect
Content			
1. Definition of the Institution's Mission		E_1	E_2
2. Sense of SED Mission		E_1 E_2	
3. Feelings about the direction the organization is moving.		E_1 E_2	
Questionnaire			
4. The kinds of things I am doing will make a long term contribution to education.		E_1 E_2	
MOBILIZATION OF ORGANIZATIONAL PLANNING			
Content			
1. Modify previously established objectives.		E_1 E_2	
2. Identify and analyze alternative courses of action.		E_1 E_2	
3. Determine priorities			E_1 E_2
4. Define standards of performance for key administrators.		E_1 E_2	
5. Specify task completion dates and action assignments.		E_1 E_2	
6. Assign responsibilities to subordinate units		E_1	E_2
7. Design a methodology by which future performance may be evaluated in relation to the performance specified in the plan.			E_1 E_2
8. Produce and implement a long-range strategic plan		E_1	E_2

ORGANIZATIONAL PLANNING PROCESS (CON.)

Fall, 1970--Spring,1971

OPERATIONAL IMPACT OF TRAINING ON ORGANIZATIONAL PLANNING	IMPACT OF TRAINING		
Item Type of Data	Positive Effect	No Effect	Negative Effect
Content			
1. My organization's over-all plan is operable.	E_2	E_1	
2. The goals of this organization are articulated.	E_2	E_1	
3. Our goals are realistic and attainable with our best efforts.	E_2	E_1	
4. My organization's policy statements are clear.	E_2	E_2	
5. My organization's performance standards are understood		E_1	E_2
CREDIBILITY OF THE PLANNING PROCESS			
Content			
1. Establish credibility of planning		E_1 E_2	
2. Role of Planning: How Integral	E_2	E_1	
3. Role of Planning: How much is needed		E_1 E_2	
4. Role of Planning: Emergence		E_1 E_2	
Questionnaire			
5. As I see it, planning is an integral part of running the State's schools.		E_1 E_2	

The first two sub-headings, Definition of the Mission of the Organization and Mobilization of ORganizational Planning which are based entirely on variables related to the AMA training goals revealed no significant changes in either organization E1 or E2 which could be described as a positive effect of training. And, there were seven cases of negative effects; that is, the amount of emphasis given to certain variables decreased significantly as a result of training.

All of this data is taken from the reactions of the top twelve administrators to the question of what they expected to obtain from the training and what they said they obtained from the training. This data suggests the training program was more or less what the top administrators expected to get and had, at the minimum, no effect on increasing their positive orientation to the various steps in organizational planning.

The third sub-heading, which was based entirely on questionnaire items, provided a different set of effects. This data indicated the training program had positive effects in four specific areas in organization E2 and had no effect in E1. In one case, training reduced the extent members of organization E2 understood performance standards.

What this indicates is that the operational impact of the training was significant in one of the States and not in the other. The State in which this was the case was also the State which experienced a different form of the EPP program; it received three weeks of training instead of two. There were two intersession periods; the participants returned to their organization between the first and second week and between the second and third week of training.

In other words, because the top twelve administrators who were engaged in the EPP program returned to their organizations twice for extended periods of time between the training sessions, this had the effect of creating a greater level of awareness among the population of people who responded to the questionnaire. This awareness was produced because of two factors: 1) the people who went through this special form of the EPP were the key or top level administrators and therefore more of a visible role model and because of these intersession periods enabled this set of administrators greater opportunity to discuss issues and problems which were a product of the training with people with whom they had "good communications."

Since the other organization did not experience the program in this manner, we have an example of the effects of two different training designs. One which did not promote change in attitudes and one which did.

Finally, with one exception the program had no effect on the credibility of organizational planning in either of the two States. This is collaborated by both forms of measurement utilized in the research.

Turning to the second expected impact area, Role Relationships and Group Standards, we find a generally mixed pattern of effects with seven positive training effects out of a possible 34 opportunities (17 for each State). Five of these positive effects occurred in Experimental State E2 which, as was pointed out, went through a somewhat different training program.

SUMMARY OF RESEARCH FINDINGS

ROLE RELATIONSHIPS AND GROUP STANDARDS

Fall, 1970--Spring, 1971

LEADERSHIP CLIMATE	IMPACT OF TRAINING		
Item Type of Data Content	Positive Effect	No Effect	Negative Effect
1. Employee interpersonal skills		E_1 E_2	
2 Attitude of boss toward AMA training.		E_1 E_2	
Questionnaire			
3. My manager makes it clear he is committed to the success of our projects.	E_1	E2	
4. My manager encourages and supports innovation	E1	E2	
5. Based on information I have received from my boss, I know if I am measuring up in my job.	E2	E1	
6. Higher management's reactions to the problems that reach them are fair.	E2	E1	
7. My boss has expressed belief that the American Management Association's training program will be helpful.	E1	E2	
DECISION MAKING			
Content			
1. Involvement in decision making		E1 E2	
2. Quality of decision making		E1 E2	
Questionnaire			
3. The people I work with participate appripriately in setting the goals of our work.	E1	E2	
4. I am appropriately involved in decisions affecting my work.	E1	E2	

ROLE RELATIONSHIPS AND GROUP STANDARDS (CON.)

Fall, 1970--Spring, 1971

MANAGEMENT TEAM	IMPACT OF TRAINING		
Item Type of Data	Positive Effect	No Effect	Negative Effect
Content			
1. Promote cooperative teamwork		E1 E2	
2. Amount of cooperative teamwork present.		E1 E2	
3. Degree to which people in the organization will support change.		E1 E2	
4 Organization reacts to problems rather than anticipates and deals with problems.		E1 E2	
Questionnaire			
5. My work group understands what we are trying to achieve.		E1 E2	
6. My group works hard to achieve its goals.		E1 E2	

Since the program had only a positive effect on one of the variables measured in organization E1, we conclude that the training program had very little effect in this particular State. In the case of the second State, E2, the program had a more significant effect on the attitudes of organizational members.

Viewed from an overall perspective and in terms of the areas which were measured by this evaluation effort, the experimental program, "Adapting and Testing Business Management Development Programs for Educational Administrators," seems to have had no significant effect on the attitudes of the top twelve administrators in the Experimental States toward either the various steps in the planning or the credibility of organizational planning. It did have an almost completely positive effect in organization E2 in changing the quesionnaire populations' perception of the operability of the organization's overall plan, its goals, and policy statements.

No effect of training occured in these areas in organization E1.

The program produced significant change in the area of role relationships and group standards in organization E2 on five out of the 17 variables in the other Experimental State.

This difference in general impact in the two States can be attributed to the two different training designs which were utilized and the general levels of organizational functioning described by the measurement scales. Organization E2 began the program with a lower level of self-described functioning on almost all of the measurement variables than did E1. Thus the potential for change was greater in E1 than in E2.

Overall, we conclude that the effect of training during the first year of evaluation was very limited in Experimental State E1 and limited in Expirimental State E2.

Final overall assessment of the efficacy of this program will be made when the second year of evaluation is completed; findings from both years will be integrated into an overall appraisal and will incorporate both attitudinal change and changes in organizational output. This second report will, in a very real sense, provide the full assessment of the impact of the program.

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APPENDIX A

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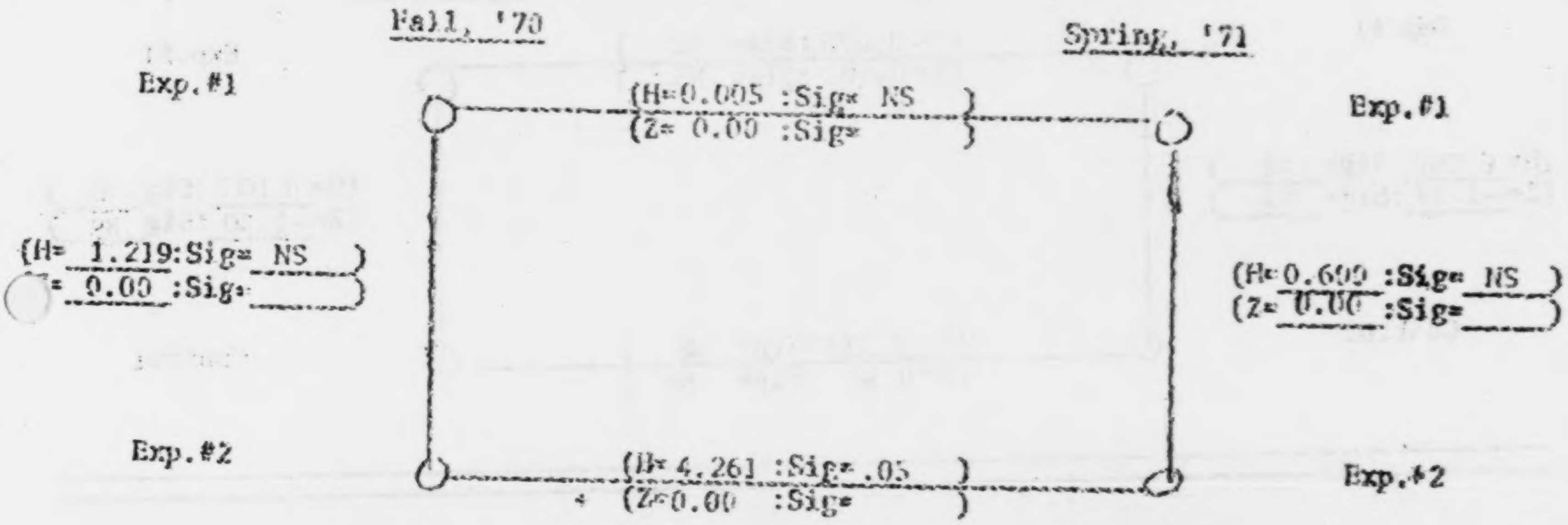
CONTENT ANALYSIS DATA

Variable 1 : Definition of Institutions Mission

SCHEMATIC PRESENTATIONS OF ANALYSIS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Spring, '71
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(Z= 0.00 :Sig=)
Exp.#2
Exp.#2
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(Z=0.00 :Sig=)

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SPRING, 1971			
Experiment #1 & Experiment #2	10 11	H = 0.600 Signif.= NS	Z = 0.00 Signif.=
FALL, 1970 to SPRING, 1971			
Experiment #1 & Experiment #1	4 10	H = 0.005 Signif.= NS	Z = 0.00 Signif.=
Experiment #2 & Experiment #2	8 11	H = 4.261 Signif.= .05	Z = 0.00 Signif.=

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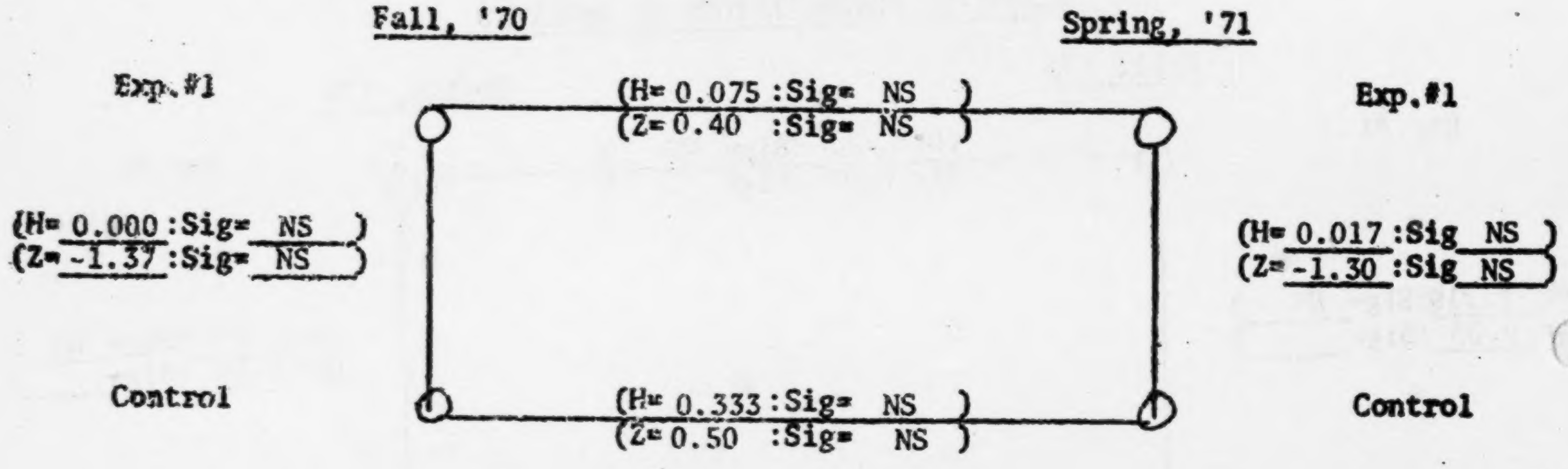
CONTENT ANALYSIS DATA

Variable 40 : Roadblock; Sense of State Educational Agency Mission

SCHEMATIC PRESENTATIONS OF ANALYSIS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Spring, '71
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Exp.#1
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(Z= -1.37 :Sig= NS)
(H= 0.017 :Sig NS)
(Z= -1.30 :Sig NS)
Control
(H= 0.333 :Sig= NS)
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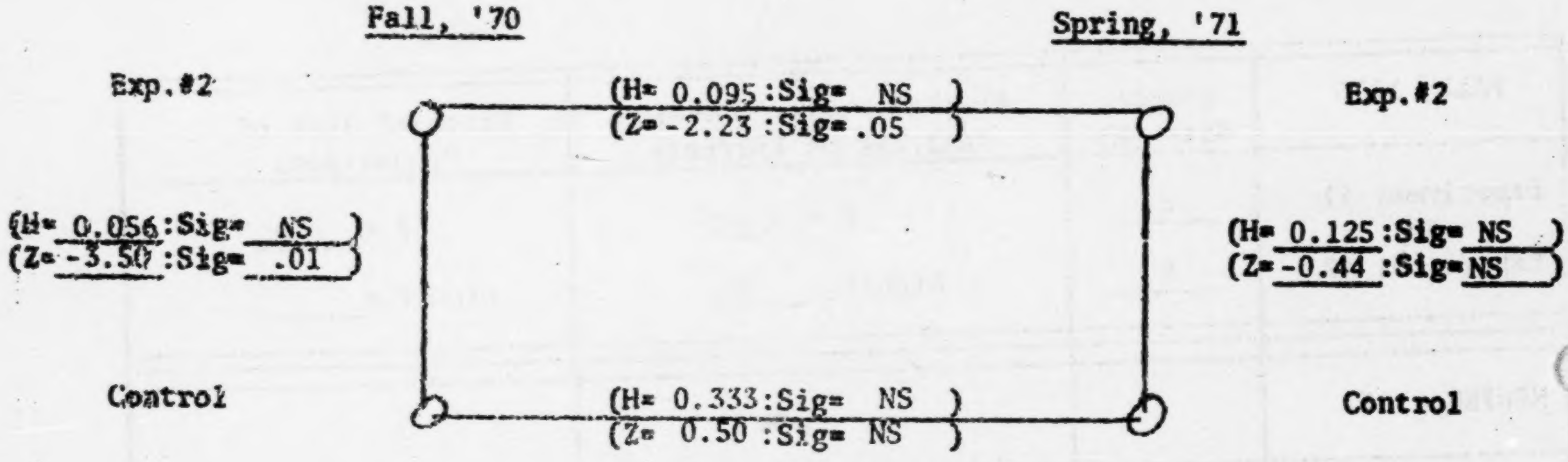
Control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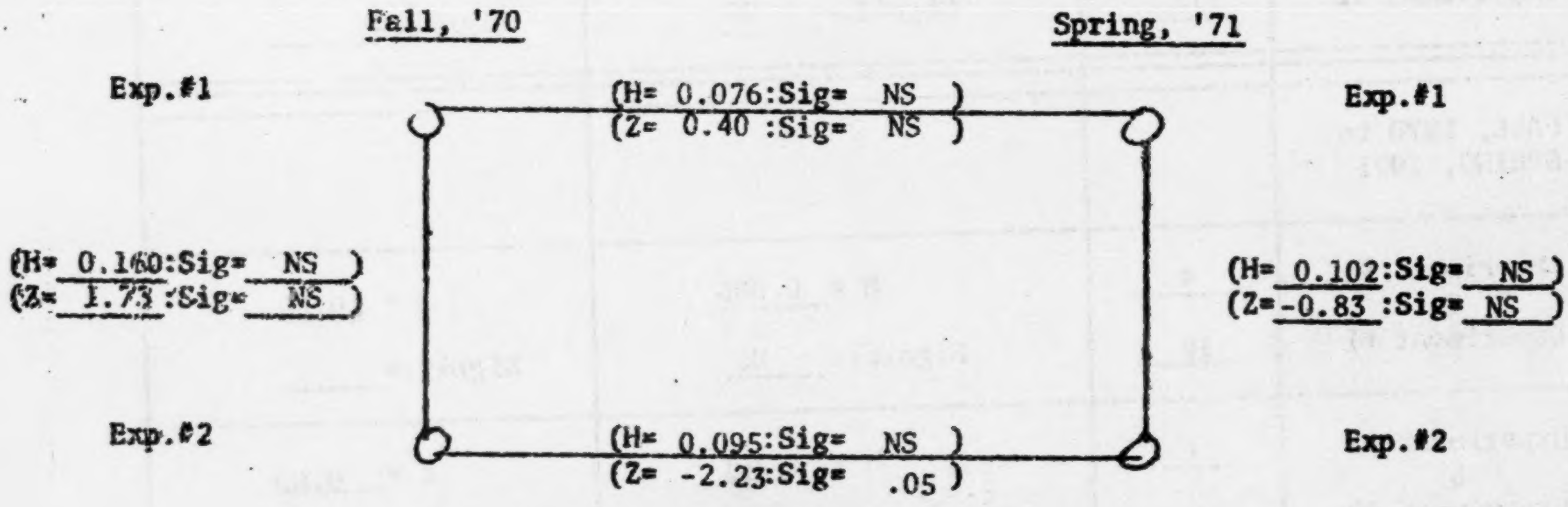
(Z= 0.50 :Sig= NS)
Control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(Z= -2.23 :Sig= .05)
Exp.#2

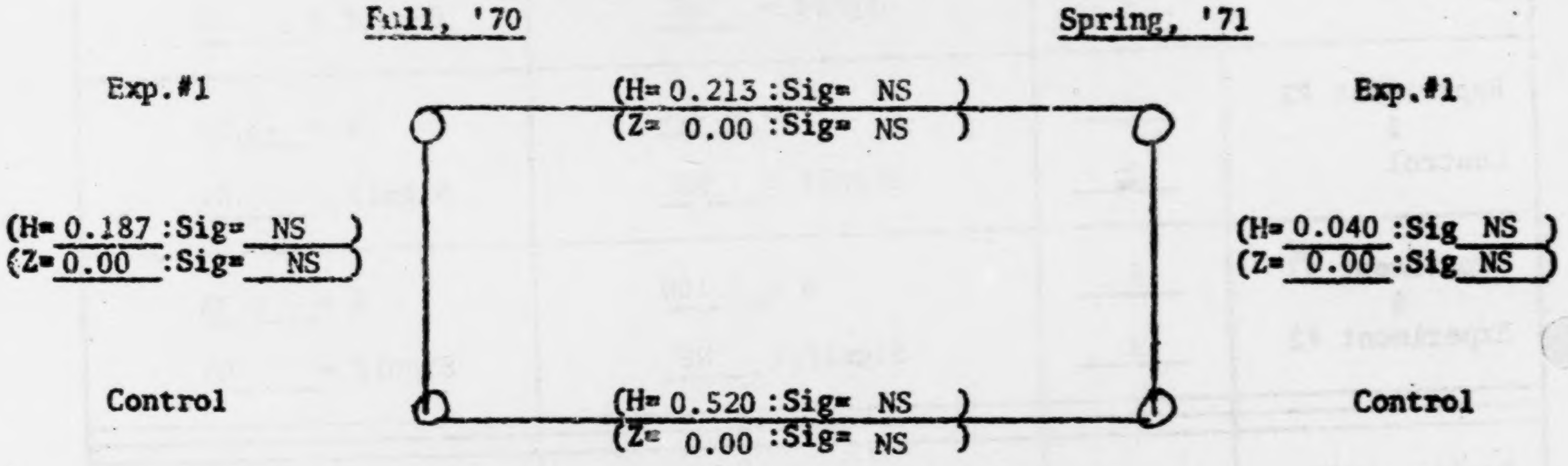
Variable 40 : Roadblock: Sense of State Educational Agency Mission

Fall, 1970	Sample Size (N)	Kruskal-Wallis One-Way Analysis of Variance	Binomial Test of Proportions
Experiment #1 & Control	5 2	H = 0.000 Signif.= NS	Z = -1.37 Signif.= NS
Experiment #2 & Control	9 2	H = 0.056 Signif.= NS	Z = -3.50 Signif.= .01
Experiment #1 & Experiment #2	5 9	H = 0.160 Signif.= NS	Z = 1.73 Signif.= NS
Spring, 1971			
Experiment #1 & Control	6 3	H = 0.017 Signif.= NS	Z = -1.30 Signif.= NS
Experiment #2 & Control	4 3	H = 0.125 Signif.= NS	Z = -0.44 Signif.= NS
Experiment #1 & Experiment #2	6 4	H = 0.102 Signif.= NS	Z = -0.83 Signif.= NS
Fall, 1970 to Spring, 1971			
Experiment #1 & Experiment #1	5 6	H = 0.075 Signif.= NS	Z = 0.40 Signif.= NS
Experiment #2 & Experiment #2	9 4	H = 0.095 Signif.= NS	Z = -2.23 Signif.= .05
Control & Control	2 3	H = 0.333 Signif.= NS	Z = 0.50 Signif.= NS

CONTENT ANALYSIS DATA

Variable 51 : How do you feel about the direction this organization is moving?

SCHEMATIC PRESENTATIONS OF ANALYSIS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Spring, '71
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Exp.#1
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(Z= 0.00 :Sig NS)
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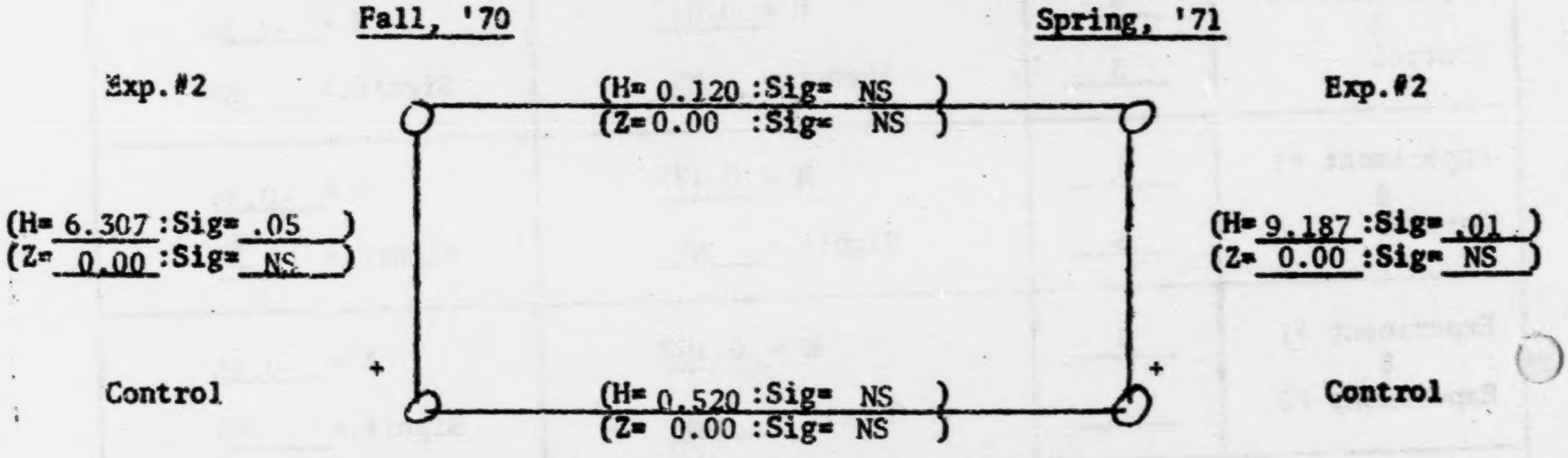
Control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Exp.#2
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(Z= 0.00 :Sig= NS)
+
+
Control
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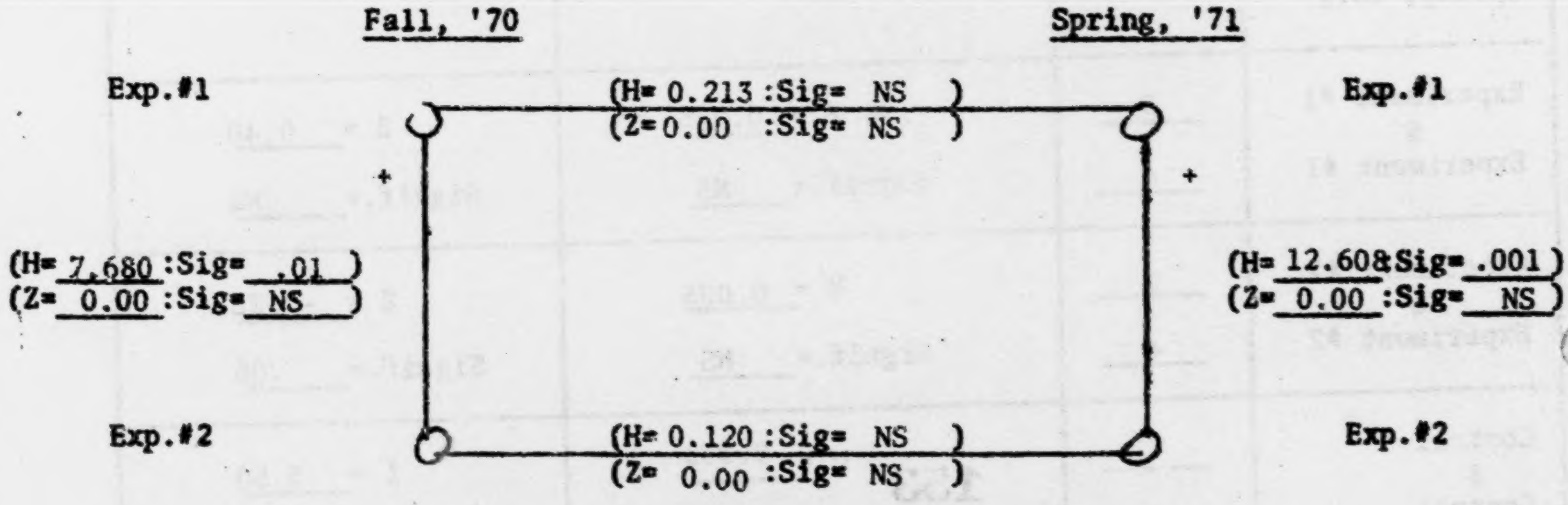
(Z= 0.00 :Sig= NS)
Control


Fall, '70
Spring, '71
Exp.#1
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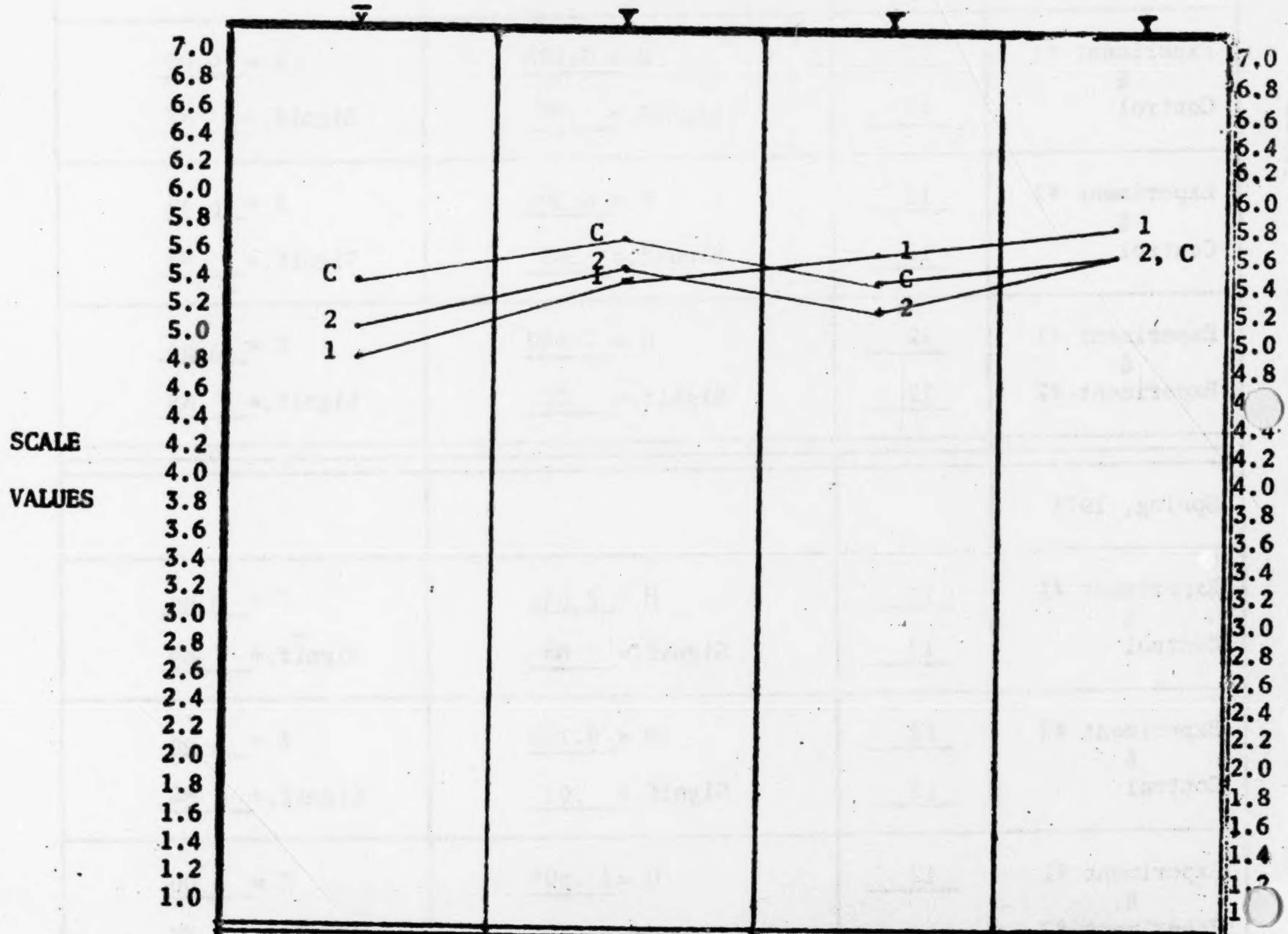
Exp.#1
+
+
(H= 7.680 :Sig= .01)
(Z= 0.00 :Sig= NS)
(H= 12.608:Sig= .001)
(Z= 0.00 :Sig= NS)
Exp.#2
(H= 0.120 :Sig= NS)
(Z= 0.00 :Sig= NS)
Exp.#2

Variable 51 : How do you feel about the direction this organization is moving?

Fall, 1970	Sample Size (N)	Kruskal-Wallis One-Way Analysis of Variance	Binomial Test of Proportions
Experiment #1 & Control	12 12	H = 0.188 Signif.= NS	Z = 0.00 Signif.= NS
Experiment #2 & Control	12 12	H = 6.308 Signif.= .05	Z = 0.00 Signif.= NS
Experiment #1 & Experiment #2	12 12	H = 7.680 Signif.= .01	Z = 0.00 Signif.= NS
Spring, 1971			
Experiment #1 & Control	12 12	H = 0.041 Signif.= NS	Z = 0.00 Signif.= NS
Experiment #2 & Control	12 12	H = 9.188 Signif.= .01	Z = 0.00 Signif.= NS
Experiment #1 & Experiment #2	12 12	H = 12.608 Signif.= .001	Z = 0.00 Signif.= NS
Fall, 1970 to Spring, 1971			
Experiment #1 & Experiment #1	12 12	H = 0.213 Signif.= NS	Z = 0.00 Signif.= NS
Experiment #2 & Experiment #2	12 12	H = 0.120 Signif.= NS	Z = 0.00 Signif.= NS
Control & Control	12 12	H = 0.521 Signif.= NS	Z = 0.00 Signif.= NS

Questionnaire Data

Variable # 29 : The kinds of things I am doing will make a long run contribution to educ ion



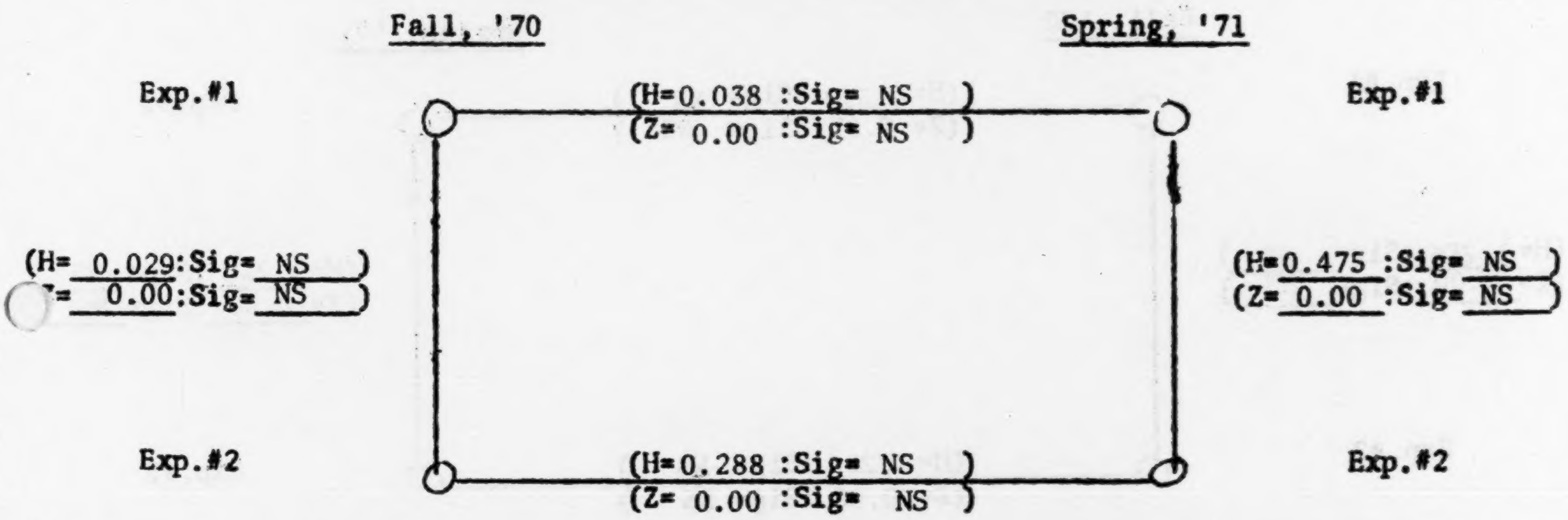
	Fall '69 T_1			Fall '70 T_2			Spring '71 T_3			Fall '71 T_4		
	N	X	SD	N	X	SD	N	X	SD	N	X	SD
Experiment (#1)	39	4.872	1.657	39	5.436	1.553	73	5.630	1.339	73	5.753	1.299
Experiment (#2)	60	5.100	1.337	60	5.467	1.214	51	5.196	1.233	52	5.558	1.074
Control (C)	65	5.353	1.494	66	5.697	1.301	61	5.393	1.159	61	5.557	1.148
Total	164			165			185			186		

TWO-WAY Anal. of Variance		T_1 & T_2		T_2 & T_3		T_3 & T_4	
		F	Signif.	F	Signif.	F	Signif.
Experiment #1 W/ Control State	Col.	3.083	NS	0.005	NS	2.003	NS
	Row	4.595	.05	0.096	NS	0.882	NS
Experiment #2 W/ Control State	Col.	2.036	NS	1.785	NS	0.407	NS
	Row	4.377	.05	3.217	NS	2.894	NS

CONTENT ANALYSIS DATA

Variable 2 : Modify previously established objectives

SCHEMATIC PRESENTATIONS OF ANALYSIS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Spring, '71
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Exp.#1
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= 0.00:Sig= NS)
(H=0.475 :Sig= NS)
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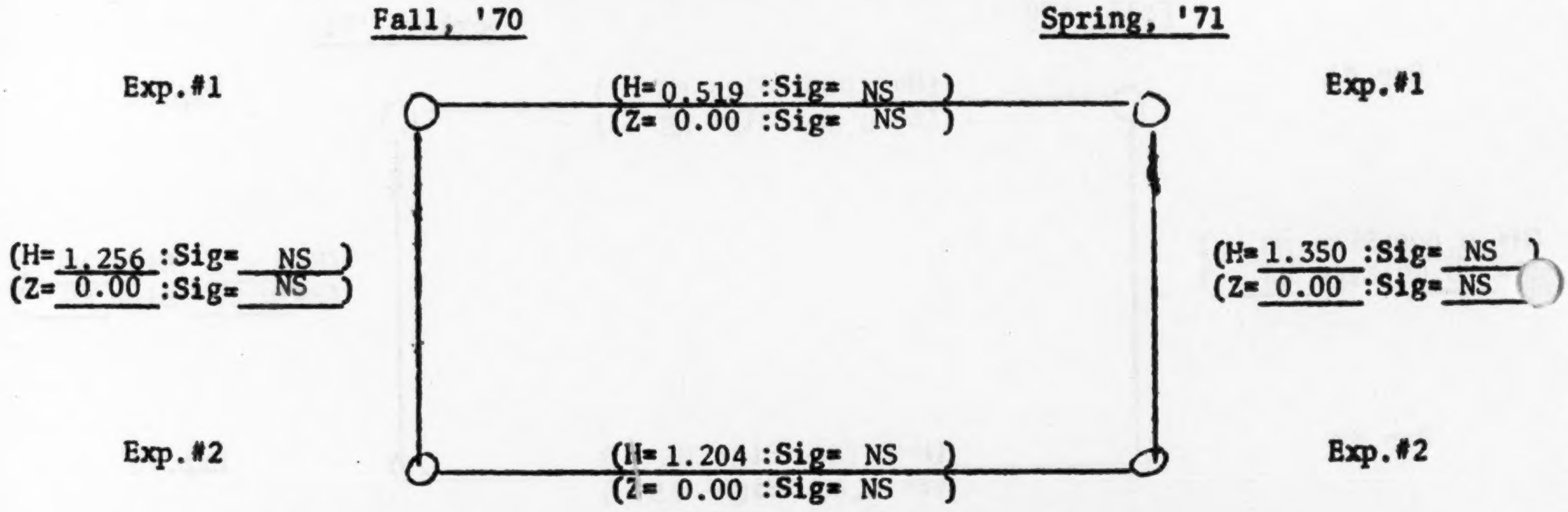
Exp.#2
(H=0.288 :Sig= NS)
(Z= 0.00 :Sig= NS)
Exp.#2

FALL, 1970	Sample Size (N)	Kruskal-Wallis One-Way Analysis of Variance	Binomial Test of Proportions
Experiment #1 & Experiment #2	4 8	H = 0.029 Signif.= NS	Z = 0.00 Signif.= NS
SPRING, 1971			
Experiment #1 & Experiment #2	11 11	H = 0.475 Signif.= NS	Z = 0.00 Signif.= NS
FALL, 1970 to SPRING, 1971			
Experiment #1 & Experiment #1	4 11	H = 0.038 Signif.= NS	Z = 0.00 Signif.= NS
Experiment #2 & Experiment #2	8 11	H = 0.288 Signif.= NS	Z = 0.00 Signif.= NS

CONTENT ANALYSIS DATA

Variable 3 : Identify and Analyze Alternative Courses of Action

SCHEMATIC PRESENTATIONS OF ANALYSIS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Spring, '71
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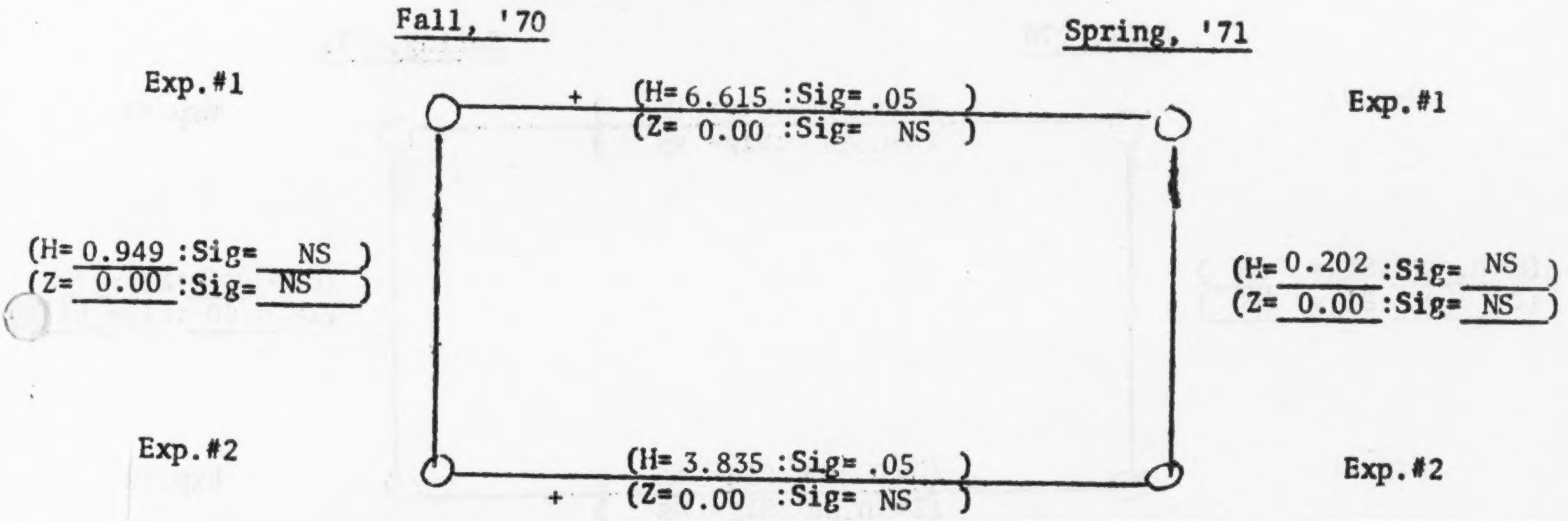
(Z= 0.00 :Sig= NS)
Exp.#2

FALL, 1970	Sample Size (N)	Kruskal-Wallis One-Way Analysis of Variance	Binomial Test of Proportions
Experiment #1 & Experiment #2	6 6	H = 1.256 Signif.= NS	Z = 0.00 Signif.= NS
SPRING, 1971			
Experiment #1 & Experiment #2	6 8	H = 1.350 Signif.= NS	Z = 0.00 Signif.= NS
FALL, 1970 to SPRING, 1971			
Experiment #1 & Experiment #1	6 6	H = 0.519 Signif.= NS	Z = 0.00 Signif.= NS
Experiment #2 & Experiment #2	6 8	H = 1.204 Signif.= NS	Z = 0.00 Signif.= NS

CONTENT ANALYSIS DATA

Variable 4 : Determine Priorities

SCHEMATIC PRESENTATIONS OF ANALYSIS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(Z= 0.00 :Sig= NS)
Exp.#2
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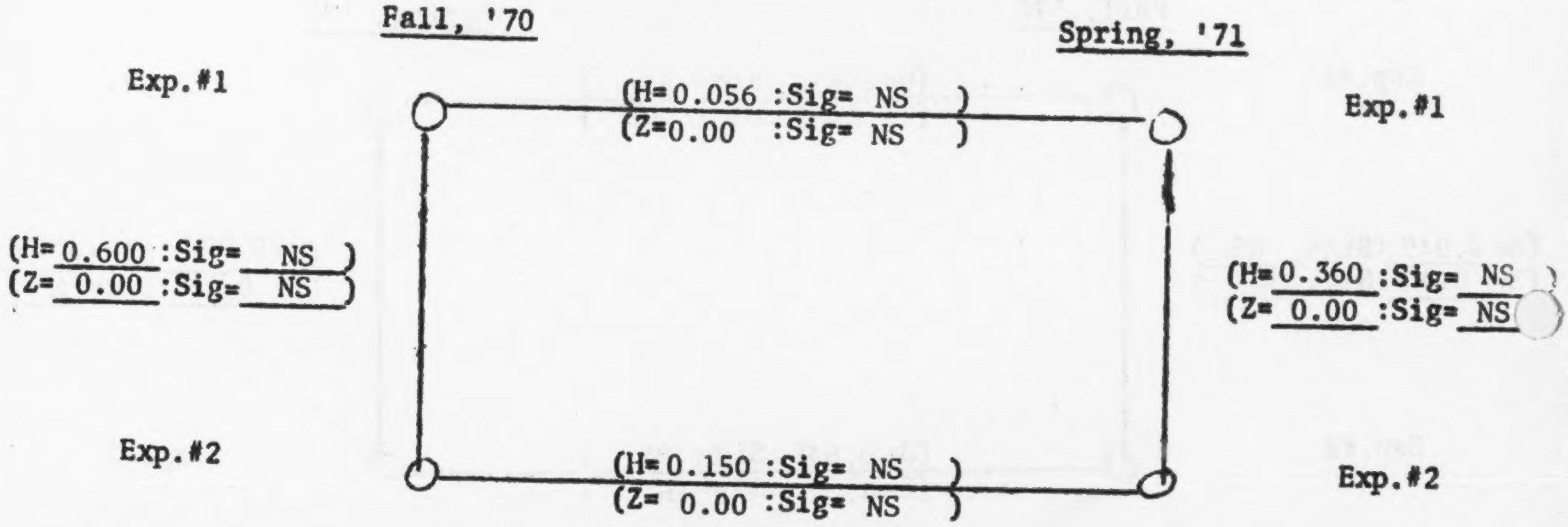
+ (Z= 0.00 :Sig= NS)
Exp.#2

FALL, 1970	Sample Size (N)	Kruskal-Wallis One-Way Analysis of Variance	Binomial Test of Proportions
Experiment #1 & Experiment #2	5 7	H = 0.949 Signif.= NS	Z = 0.00 Signif.= NS
SPRING, 1971			
Experiment #1 & Experiment #2	10 9	H = 0.202 Signif.= NS	Z = 0.00 Signif.= NS
FALL, 1970 to SPRING, 1971			
Experiment #1 & Experiment #1	5 10	H = 6.615 Signif.= .01	Z = 0.00 Signif.= NS
Experiment #2 & Experiment #2	7 9	H = 3.835 Signif.= .05	Z = 0.00 Signif.= NS

CONTENT ANALYSIS DATA

Variable 5 : Define Standards of Performance for Key Administrators

SCHEMATIC PRESENTATIONS OF ANALYSIS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Exp.#1
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(Z=0.00 :Sig= NS)
(H=0.360 :Sig= NS)
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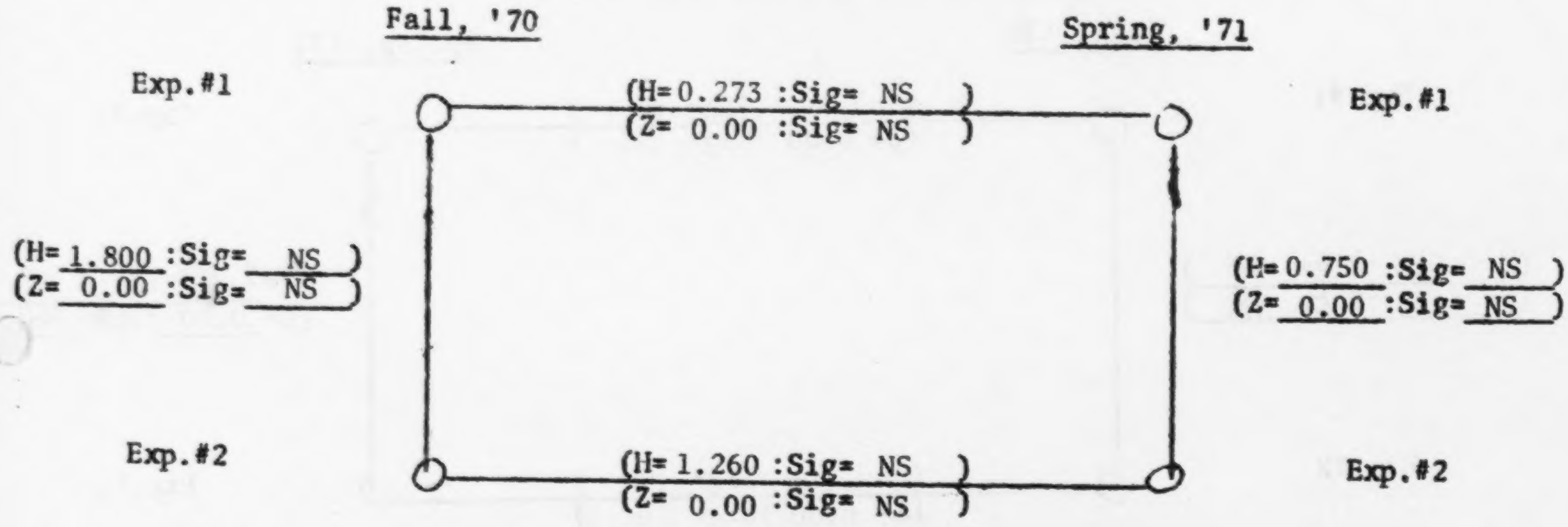
Exp.#2
(H=0.150 :Sig= NS)
(Z=0.00 :Sig= NS)
Exp.#2

FALL, 1970	Sample Size (N)	Kruskal-Wallis One-Way Analysis of Variance	Binomial Test of Proportions
Experiment #1 & Experiment #2	2 2	H = 0.600 Signif.= NS	Z = 0.00 Signif.= NS
SPRING, 1971			
Experiment #1 & Experiment #2	9 5	H = 0.360 Signif.= NS	Z = 0.00 Signif.= NS
FALL, 1970 to SPRING, 1971			
Experiment #1 & Experiment #1	2 9	H = 0.056 Signif.= NS	Z = 0.00 Signif.= NS
Experiment #2 & Experiment #2	2 5	H = 0.150 Signif.= NS	Z = 0.00 Signif.= NS

CONTENT ANALYSIS DATA

Variable 6 : Specify Task Completion Dates and Action Assignments

SCHEMATIC PRESENTATIONS OF ANALYSIS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Spring, '71
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(H=1.260 :Sig= NS)
(Z= 0.00 :Sig= NS)
Exp.#2

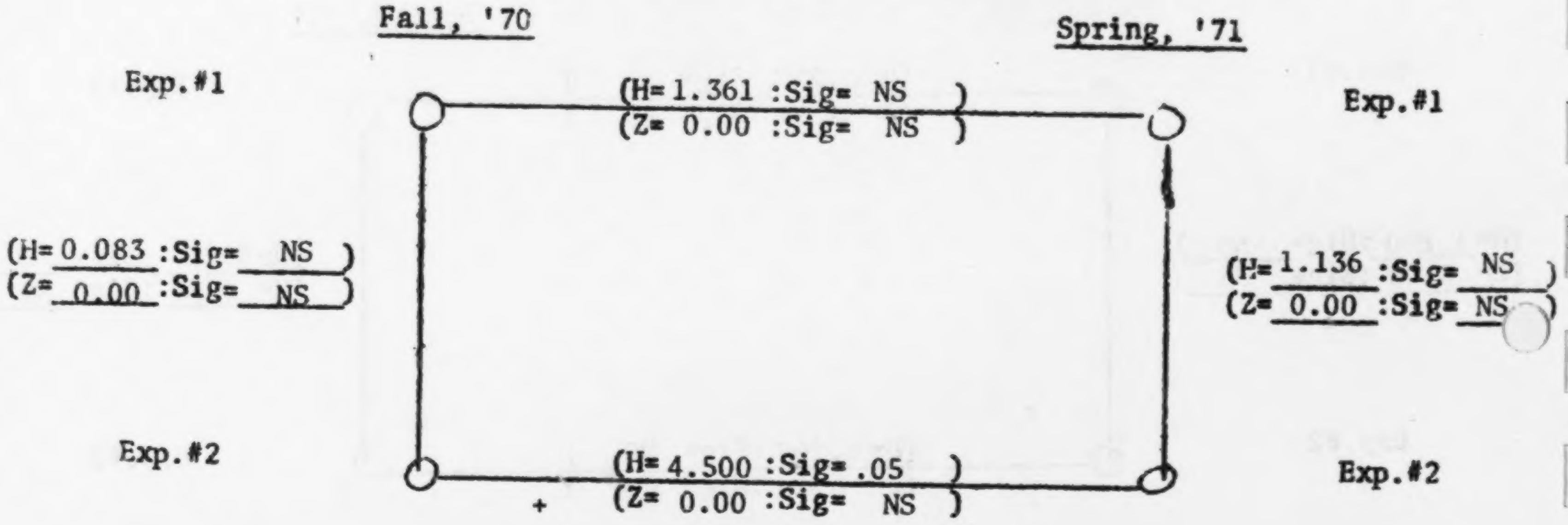
FALL, 1970	Sample Size (N)	Kruskal-Wallis One-Way Analysis of Variance	Binomial Test of Proportions
Experiment #1 & Experiment #2	1 3	H = 1.800 Signif.= NS	Z = 0.00 Signif.= NS
SPRING, 1971			
Experiment #1 & Experiment #2	9 8	H = 0.750 Signif.= NS	Z = 0.00 Signif.= NS
FALL, 1970 to SPRING, 1971			
Experiment #1 & Experiment #1	1 9	H = 0.273 Signif.= NS	Z = 0.00 Signif.= NS
Experiment #2 & Experiment #2	3 8	H = 1.260 Signif.= NS	Z = 0.00 Signif.= NS

XVI

CONTENT ANALYSIS DATA

Variable 7 : Assign Responsibilities to Subordinate Units

SCHEMATIC PRESENTATIONS OF ANALYSIS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Spring, '71
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Exp.#1
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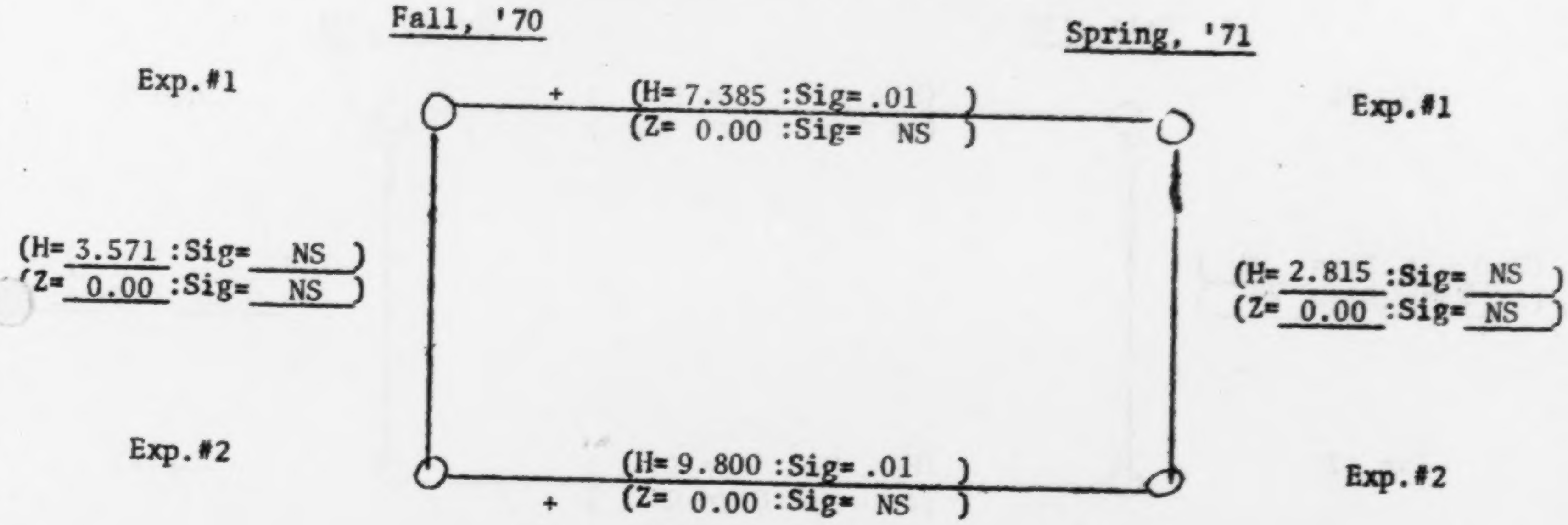
(Z= 0.00 :Sig= NS)
Exp.#2
(H= 4.500 :Sig= .05)
(Z= 0.00 :Sig= NS)
Exp.#2
+

FALL, 1970	Sample Size (N)	Kruskal-Wallis One-Way Analysis of Variance	Binomial Test of Proportions
Experiment #1 & Experiment #2	2 3	H = 0.083 Signif.= NS	Z = 0.00 Signif.= NS
SPRING, 1971			
Experiment #1 & Experiment #2	6 4	H = 1.136 Signif.= NS	Z = 0.00 Signif.= NS
FALL, 1970 to SPRING, 1971			
Experiment #1 & Experiment #1	2 6	H = 1.361 Signif.= NS	Z = 0.00 Signif.= NS
Experiment #2 & Experiment #2	3 4	H = 4.500 Signif.= .05	Z = 0.00 Signif.= NS

CONTENT ANALYSIS DATA

Variable 8 : Design A Methodology by which Future Performance May Be Evaluated in Relation to the Performance Specified in the Plan.

SCHEMATIC PRESENTATIONS OF ANALYSIS

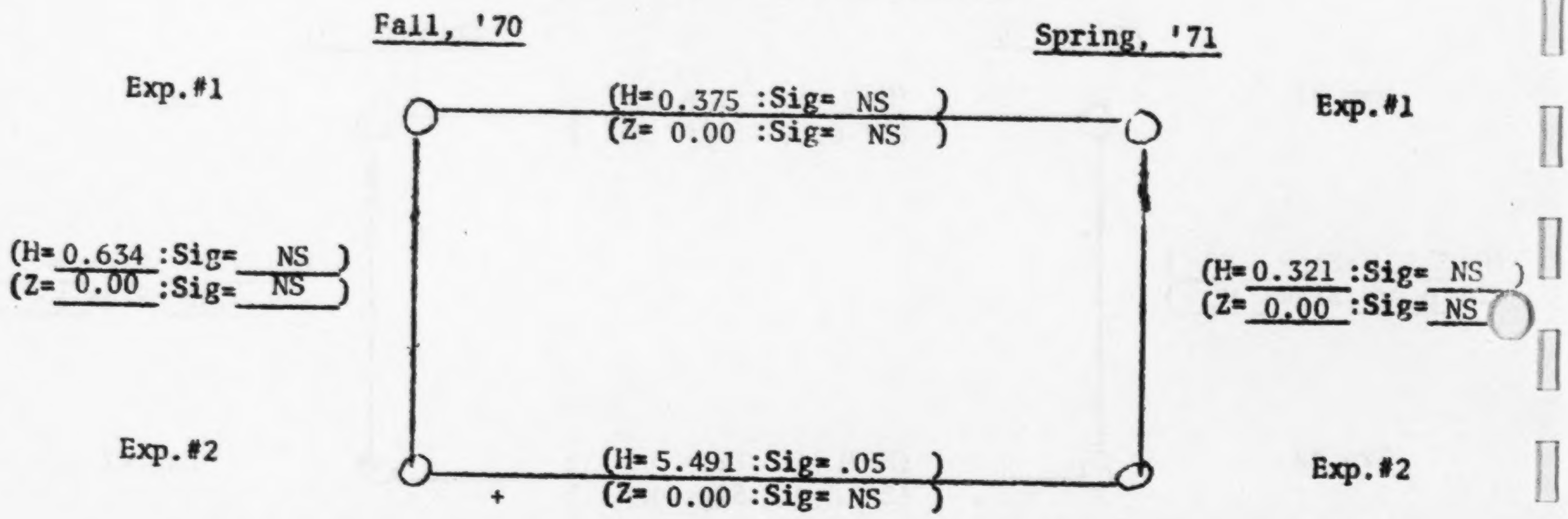

Fall, '70
Spring, '71
Exp.#1
Exp.#1
Exp.#2
Exp.#2
+ (H= 7.385 :Sig= .01)
(Z= 0.00 :Sig= NS)
(H= 3.571 :Sig= NS)
(Z= 0.00 :Sig= NS)
(H= 2.815 :Sig= NS)
(Z= 0.00 :Sig= NS)
(H= 9.800 :Sig= .01)
+ (Z= 0.00 :Sig= NS)

FALL, 1970	Sample Size (N)	Kruskal-Wallis One-Way Analysis of Variance	Binomial Test of Proportions
Experiment #1 & Experiment #2	4 7	H = 3.571 Signif.= NS	Z = 0.00 Signif.= NS
SPRING, 1971			
Experiment #1 & Experiment #2	8 7	H = 2.815 Signif.= NS	Z = 0.00 Signif.= NS
FALL, 1970 to SPRING, 1971			
Experiment #1 & Experiment #1	4 8	H = 7.385 Signif.= .01	Z = 0.00 Signif.= NS
Experiment #2 & Experiment #2	7 7	H = 9.800 Signif.= .01	Z = 0.00 Signif.= NS

CONTENT ANALYSIS DATA

Variable 9 : Produce and Implement a Long Range Strategic Plan

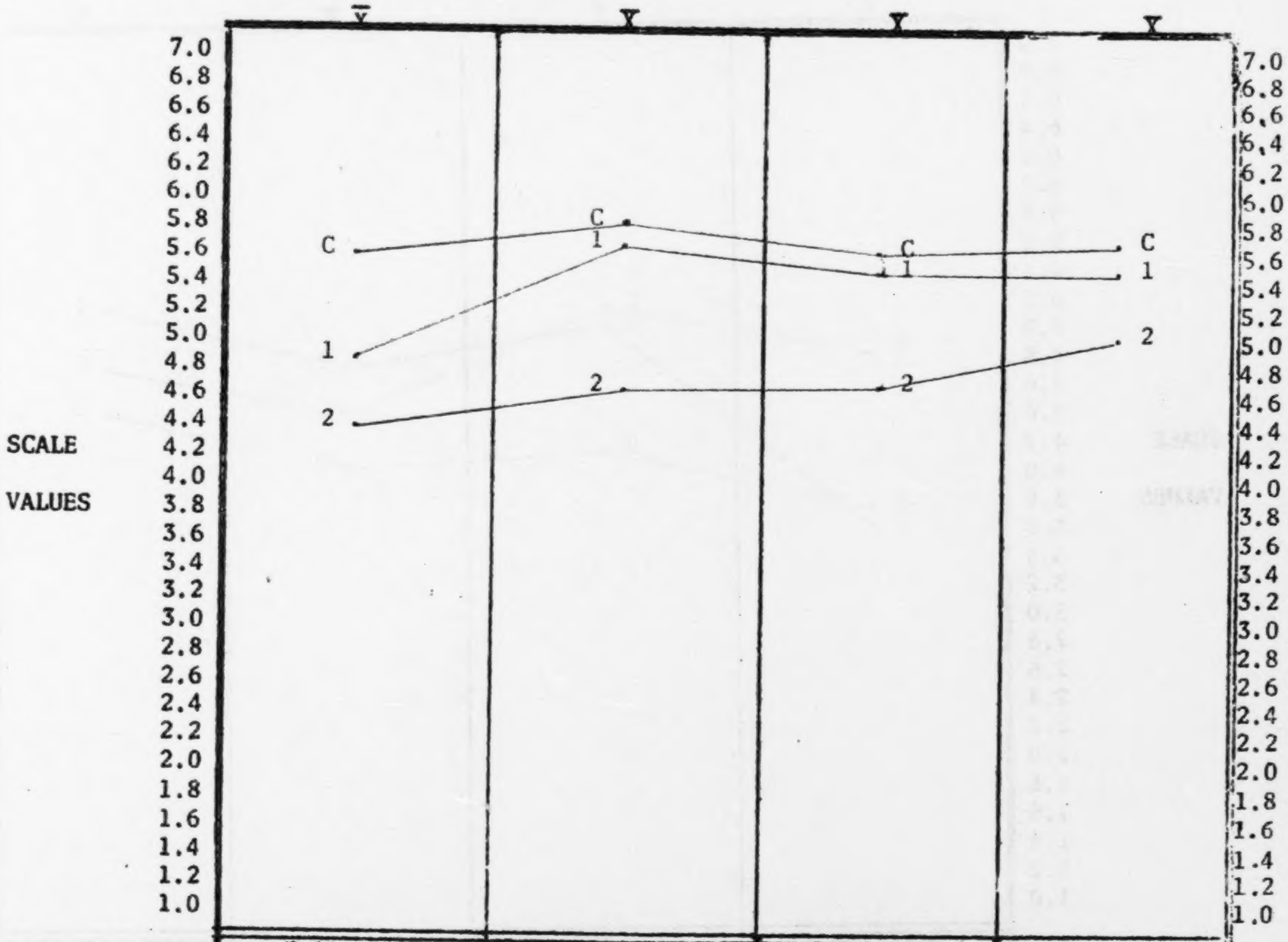
SCHEMATIC PRESENTATIONS OF ANALYSIS


Fall, '70
Spring, '71
Exp.#1
(H= 0.375 :Sig= NS)
(Z= 0.00 :Sig= NS)
Exp.#1
(H= 0.634 :Sig= NS)
(Z= 0.00 :Sig= NS)
(H= 0.321 :Sig= NS)
(Z= 0.00 :Sig= NS)
Exp.#2
(H= 5.491 :Sig= .05)
(Z= 0.00 :Sig= NS)
Exp.#2

FALL, 1970	Sample Size (N)	Kruskal-Wallis One-Way Analysis of Variance	Binomial Test of Proportions
Experiment #1 & Experiment #2	5 10	H = 0.634 Signif.= NS	Z = 0.00 Signif.= NS
SPRING, 1971			
Experiment #1 & Experiment #2	10 10	H = 0.321 Signif.= NS	Z = 0.00 Signif.= NS
FALL, 1970 to SPRING, 1971			
Experiment #1 & Experiment #1	5 10	H = 0.375 Signif.= NS	Z = 0.00 Signif.= NS
Experiment #2 & Experiment #2	10 10	H = 5.491 Signif.= .05	Z = 0.00 Signif.= NS

Questionnaire Data

Variable # 40 : My organization's overall plan is operable



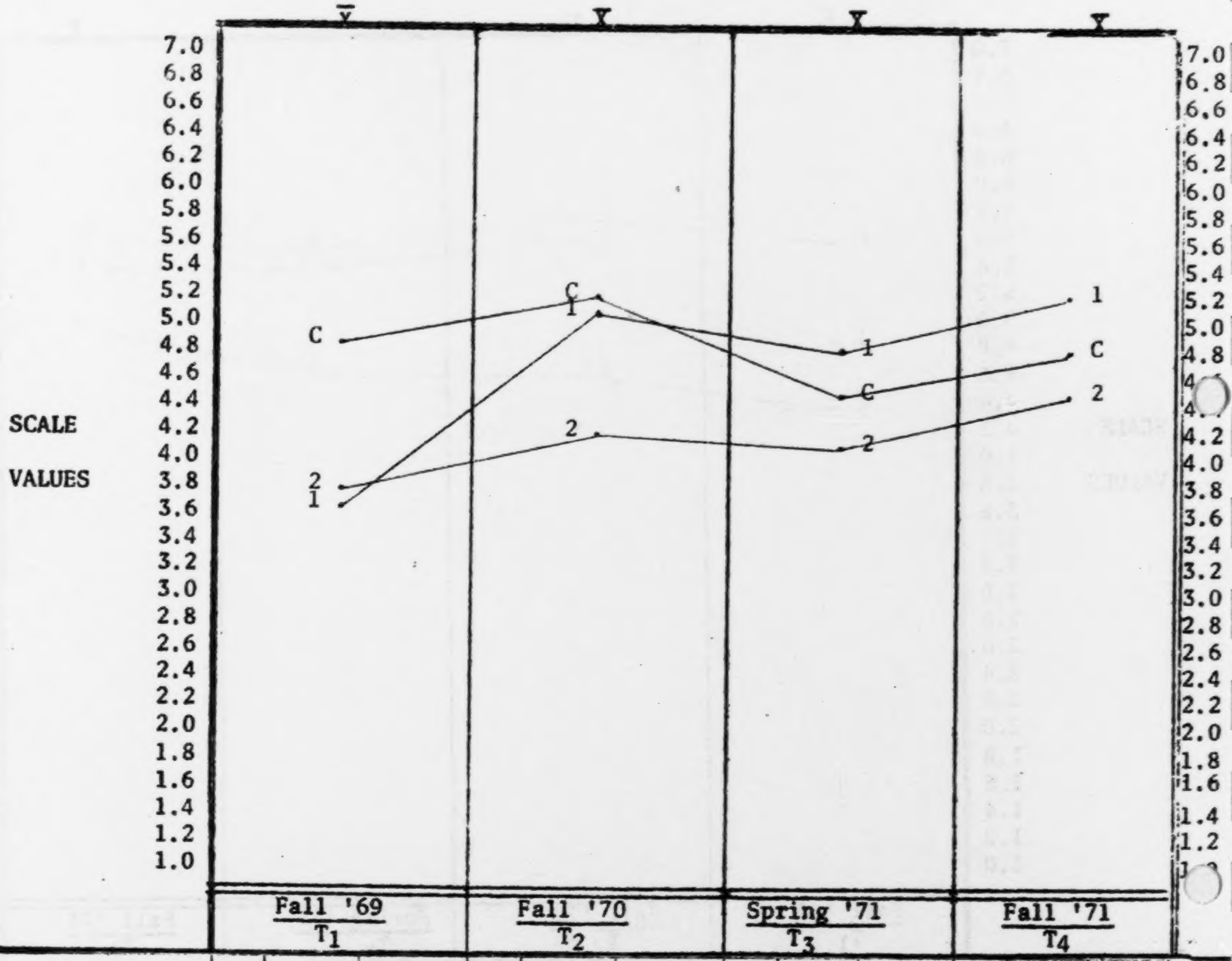
	Fall '69 T_1			Fall '70 T_2			Spring '71 T_3			Fall '71 T_4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experiment (#1)	38	4.921	1.549	38	5.658	1.169	73	5.493	1.249	73	5.548	1.344
Experiment (#2)	59	4.441	1.774	60	4.723	1.616	51	4.725	1.266	52	5.019	1.350
Control (C)	65	5.631	1.376	66	5.803	1.140	61	5.590	1.189	61	5.672	1.180
Total	162			164			185			186		

TWO-WAY Anal. of Variance		T_1 & T_2		T_2 & T_3		T_3 & T_4	
		F	Signif.	F	Signif.	F	Signif.
Experiment #1 W/ Control State	Col.	5.172	.05	0.578	NS	0.523	NS
	Row	5.849	.05	1.404	NS	0.200	NS
Experiment #2 W/ Control State	Col.	28.099	.001	23.791	.001	20.818	.001
	Row	3.786	NS	2.033	NS	1.276	NS

XY

Questionnaire Data

Variable # 4 **:** The goals of this organization are articulated

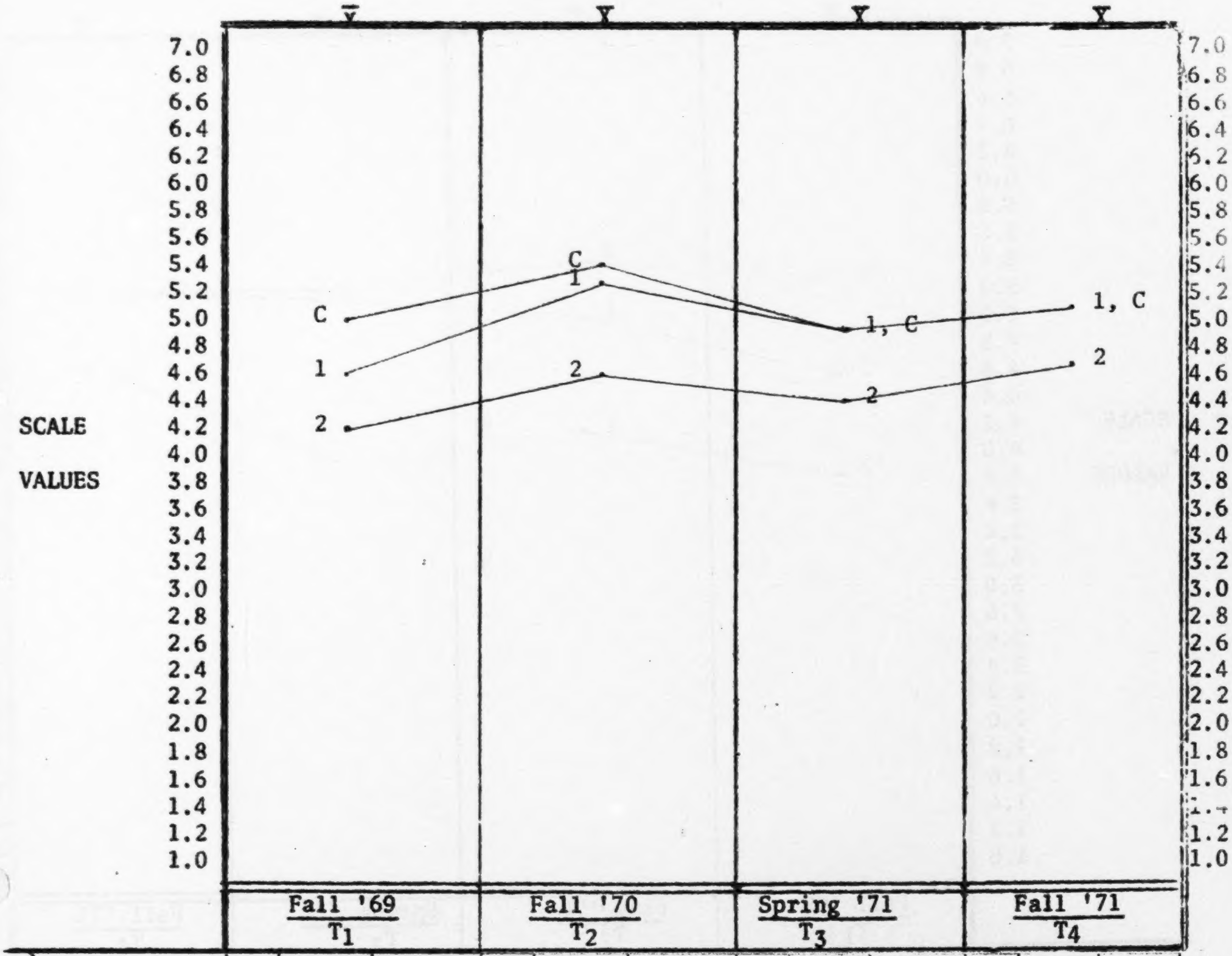


	N	X̄	SD	N	X̄	SD	N	X̄	SD	N	X̄	SD
Experiment (#1)	39	3.744	1.371	39	5.077	1.133	73	4.808	1.497	73	5.233	1.419
Experiment (#2)	60	3.800	1.592	59	4.203	1.648	52	4.096	1.376	53	4.547	1.422
Control (C)	65	4.877	1.352	65	5.231	1.222	61	4.492	1.501	61	4.787	1.529
Total	164			163			186			187		

TWO-WAY Anal. of Variance		T_1 & T_2		T_2 & T_3		T_3 & T_4	
		F	Signif.	F	Signif.	F	Signif.
Experiment #1 W/ Control State	Col.	12.379	.001	0.197	NS	4.382	.05
	Row	21.268	.001	7.578	.01	3.905	.05
Experiment #2 W/ Control State	Col.	32.422	.001	14.319	.001	2.662	NS
	Row	4.198	.05	5.063	.05	3.670	NS

Questionnaire Data

Variable # 5 **:** Our goals are realistic and attainable with our best efforts

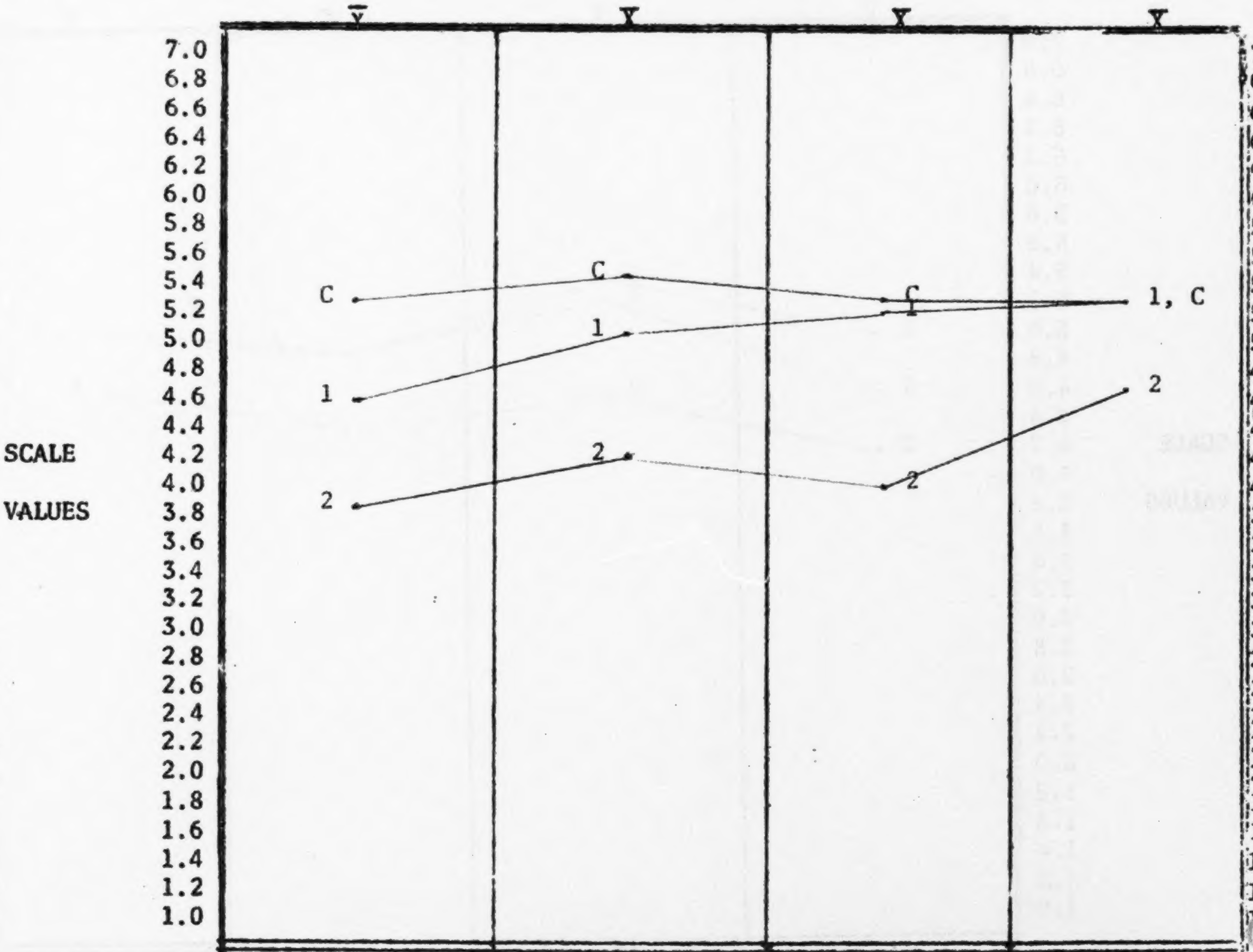


	Fall '69 T_1			Fall '70 T_2			Spring '71 T_3			Fall '71 T_4		
	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD
Experiment (#1)	38	4.605	1.285	38	5.342	1.047	73	4.945	1.332	73	5.082	1.431
Experiment (#2)	60	4.233	1.588	59	4.610	1.630	51	4.392	1.297	52	4.654	1.440
Control (C)	65	5.000	1.250	66	5.379	1.092	61	4.902	1.589	61	5.098	1.502
Total	163			163			185			186		

TWO-WAY Anal. of Variance		T_1 & T_2		T_2 & T_3		T_3 & T_4	
		F	Signif.	F	Signif.	F	Signif.
Experiment #1 W/ Control State	Col.	1.627	NS	0.000	NS	0.006	NS
	Row	10.882	.001	6.288	.05	0.869	NS
Experiment #2 W/ Control State	Col.	18.818	.001	11.964	.001	5.890	.05
	Row	4.559	.05	3.539	NS	1.360	NS

Questionnaire Data

Variable # 41 : My organization's policy statements are clear

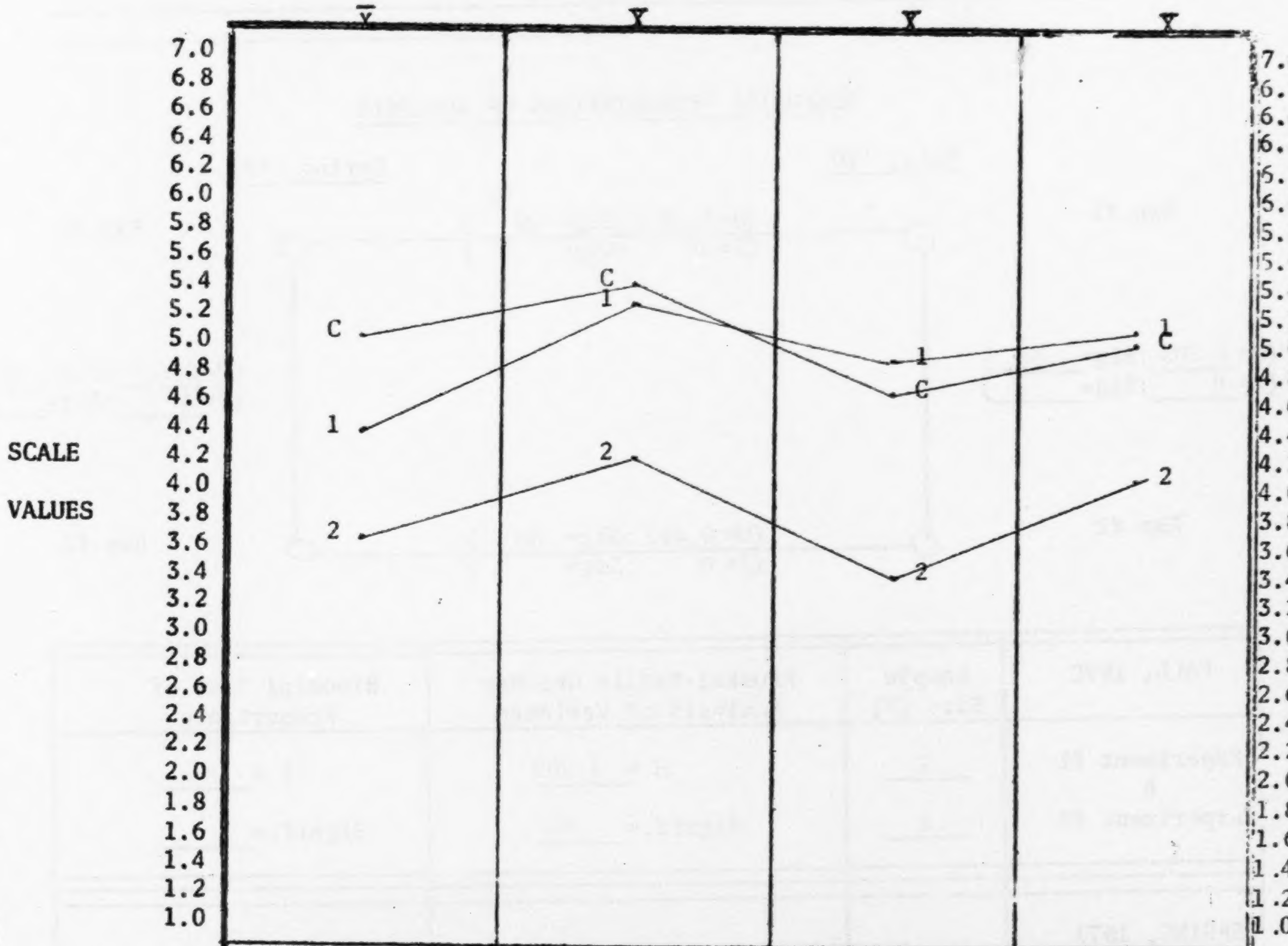


	Fall '69 T_1			Fall '70 T_2			Spring '71 T_3			Fall '71 T_4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experiment (#1)	38	4.579	1.734	38	5.132	1.597	71	5.239	1.439	71	5.310	1.450
Experiment (#2)	58	3.879	1.612	59	4.237	1.622	51	4.020	1.378	52	4.654	1.532
Control (C)	65	5.323	1.359	66	5.500	1.113	57	5.298	1.322	57	5.316	1.325
Total	163			163			179			180		

TWO-WAY Anal. of Variance		T_1 & T_2		T_2 & T_3		T_3 & T_4	
		F	Signif.	F	Signif.	F	Signif.
Experiment #1 W/ Control State	Col.	7.472	.01	1.363	NS	0.034	NS
	Row	3.213	NS	0.066	NS	0.063	NS
Experiment #2 W/ Control State	Col.	55.276	.001	50.122	.001	26.400	.001
	Row	2.159	NS	1.365	NS	2.978	NS

Questionnaire Data

Variable # 42 **:** My organizations performance standards are understood



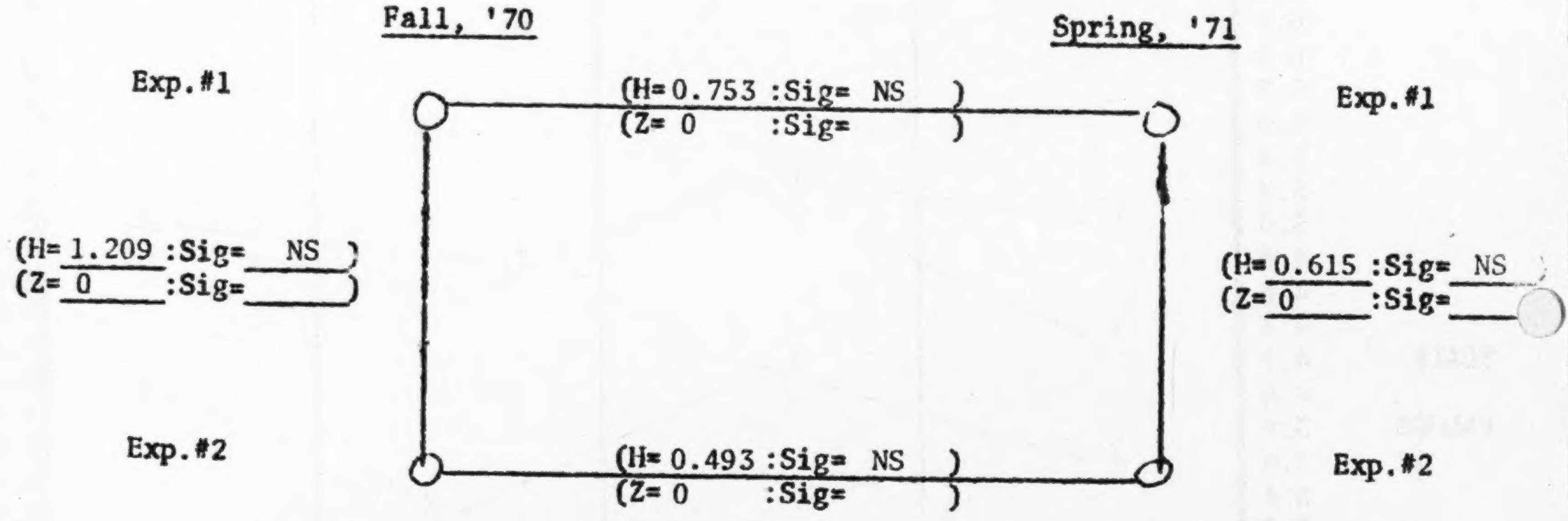
	Fall '69 T_1			Fall '70 T_2			Spring '71 T_3			Fall '71 T_4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experiment (#1)	37	4.432	1.608	36	5.250	1.273	73	4.932	1.456	73	5.110	1.370
Experiment (#2)	59	3.712	1.733	60	4.200	1.634	52	3.442	1.434	53	4.094	1.644
Control (C)	65	5.138	1.456	66	5.424	1.302	61	4.738	1.365	61	4.902	1.411
Total	161			162			186			187		

TWO-WAY Anal. of Variance		T_1 & T_2		T_2 & T_3		T_3 & T_4	
		F	Signif.	F	Signif.	F	Signif.
Experiment #1 W/ Control State	Col.	4.589	.05	0.003	NS	1.364	NS
	Row	7.210	.01	7.440	.01	0.989	NS
Experiment #2 W/ Control State	Col.	46.653	.001	45.672	.001	29.186	.001
	Row	3.977	.05	15.005	.001	4.395	.05

CONTENT ANALYSIS DATA

Variable 10 : Establish Credibility of Planning

SCHEMATIC PRESENTATIONS OF ANALYSIS

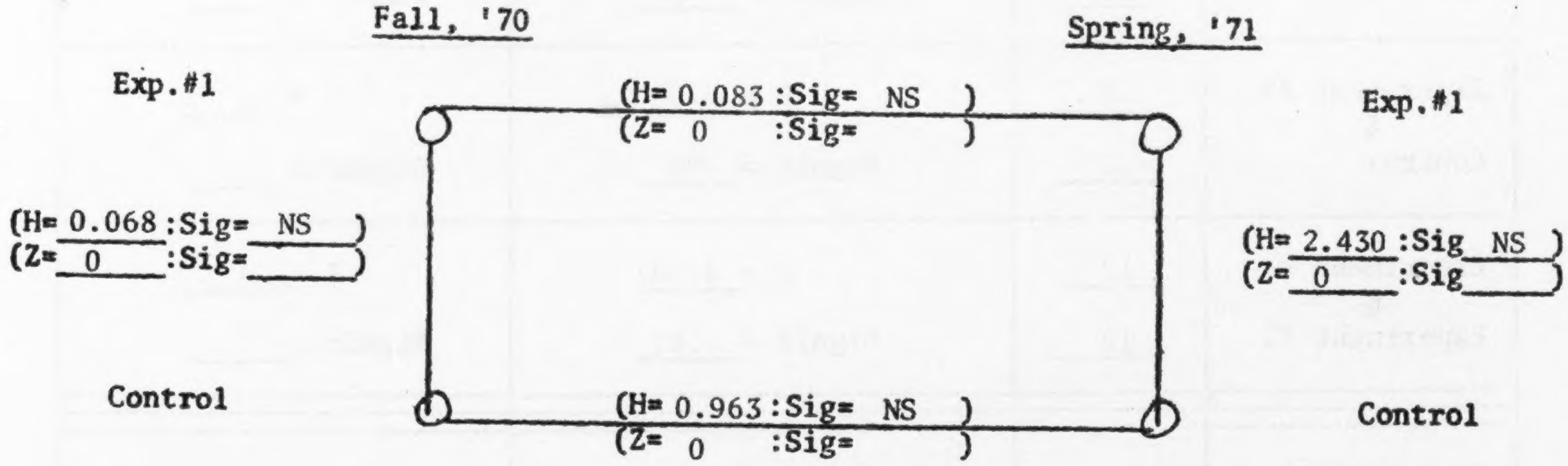

Fall, '70
Spring, '71
Exp.#1
(H= 0.753 :Sig= NS)
(Z= 0 :Sig=)
Exp.#1
(H= 1.209 :Sig= NS)
(Z= 0 :Sig=)
(H= 0.615 :Sig= NS)
(Z= 0 :Sig=)
Exp.#2
(H= 0.493 :Sig= NS)
(Z= 0 :Sig=)
Exp.#2

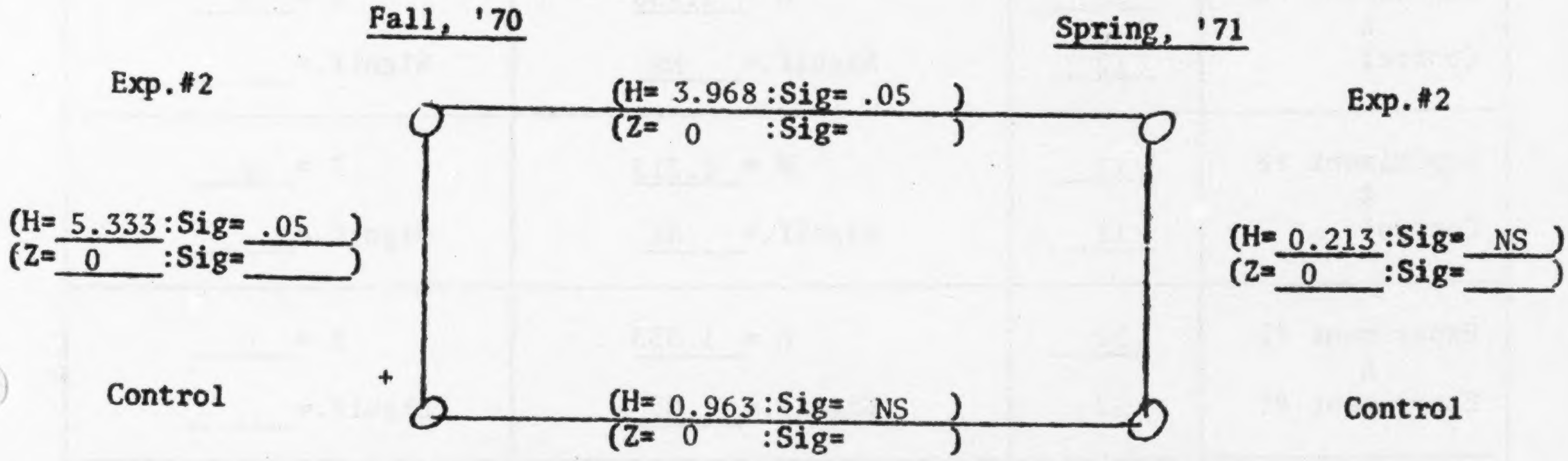
FALL, 1970	Sample Size (N)	Kruskal-Wallis One-Way Analysis of Variance	Binomial Test of Proportions
Experiment #1 & Experiment #2	7 8	H = 1.209 Signif.= NS	Z = 0 Signif.=
SPRING, 1971			
Experiment #1 & Experiment #2	8 11	H = 0.615 Signif.= NS	Z = 0 Signif.=
FALL, 1970 to SPRING, 1971			
Experiment #1 & Experiment #1	7 8	H = 0.753 Signif.= NS	Z = 0 Signif.=
Experiment #2 & Experiment #2	8 11	H = 0.493 Signif.= NS	Z = 0 Signif.=

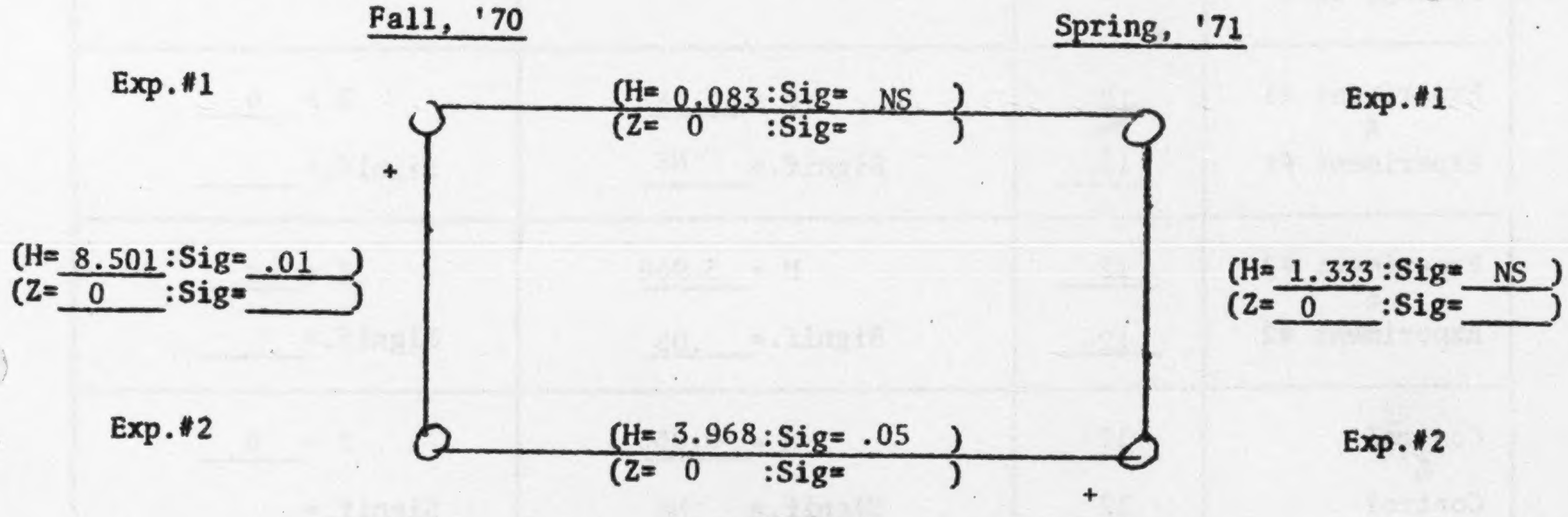
CONTENT ANALYSIS DATA

Variable 52 : Planning Integral Part: Role of Planning

SCHEMATIC PRESENTATIONS OF ANALYSIS


Fall, '70
Spring, '71
Exp.#1
(H= 0.083 :Sig= NS)
(Z= 0 :Sig=)
Exp.#1
(H= 0.068 :Sig= NS)
(Z= 0 :Sig=)
(H= 2.430 :Sig NS)
(Z= 0 :Sig)
Control
(H= 0.963 :Sig= NS)
(Z= 0 :Sig=)
Control


Fall, '70
Spring, '71
Exp.#2
(H= 3.968 :Sig= .05)
(Z= 0 :Sig=)
Exp.#2
(H= 5.333 :Sig= .05)
(Z= 0 :Sig=)
(H= 0.213 :Sig= NS)
(Z= 0 :Sig=)
+
Control
(H= 0.963 :Sig= NS)
(Z= 0 :Sig=)
Control


Fall, '70
Spring, '71
Exp.#1
(H= 0.083 :Sig= NS)
(Z= 0 :Sig=)
Exp.#1
+
(H= 8.501 :Sig= .01)
(Z= 0 :Sig=)
(H= 1.333 :Sig= NS)
(Z= 0 :Sig=)
Exp.#2
(H= 3.968 :Sig= .05)
(Z= 0 :Sig=)
Exp.#2
+

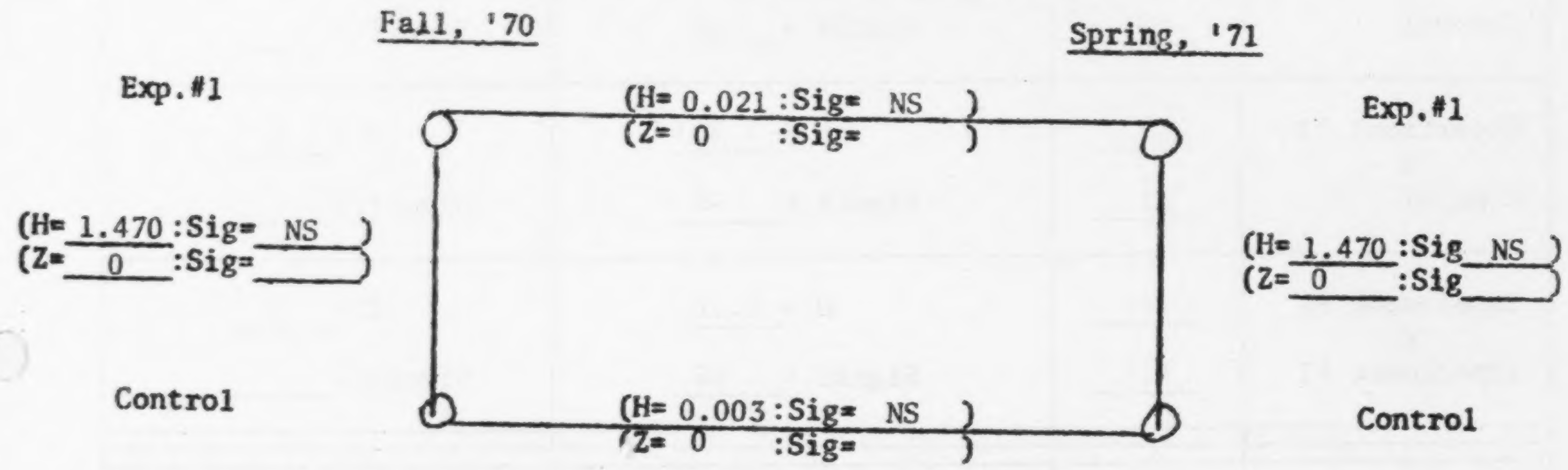
52 : Planning Integral Part. Role of Planning

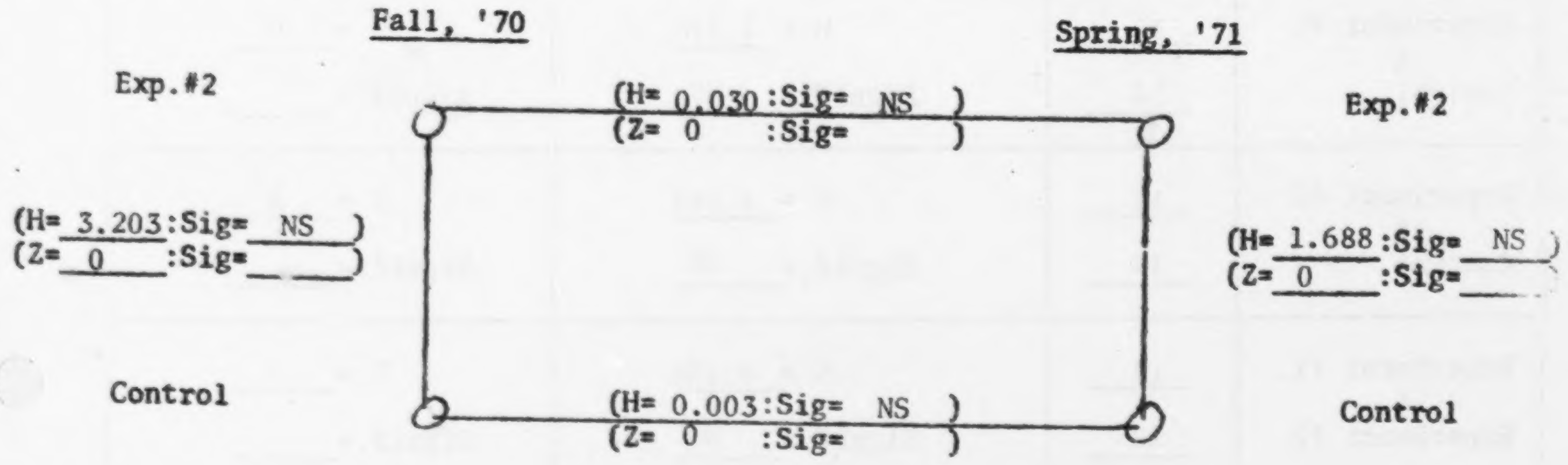
Fall, 1970	Sample Size (N)	Kruskal-Wallis One-Way Analysis of Variance	Binomial Test of Proportions
Experiment #1 & Control	12 12	H = 0.068 Signif.= NS	Z = 0 Signif.=
Experiment #2 & Control	12 12	H = 5.333 Signif.= .05	Z = 0 Signif.=
Experiment #1 & Experiment #2	12 12	H = 8.501 Signif.= .01	Z = 0 Signif.=
Spring, 1971			
Experiment #1 & Control	12 12	H = 2.430 Signif.= NS	Z = 0 Signif.=
Experiment #2 & Control	12 12	H = 0.213 Signif.= NS	Z = 0 Signif.=
Experiment #1 & Experiment #2	12 12	H = 1.333 Signif.= NS	Z = 0 Signif.=
Fall, 1970 to Spring, 1971			
Experiment #1 & Experiment #1	12 12	H = 0.083 Signif.= NS	Z = 0 Signif.=
Experiment #2 & Experiment #2	12 12	H = 3.968 Signif.= .05	Z = 0 Signif.=
Control & Control	12 12	H = 0.963 Signif.= NS	Z = 0 Signif.=

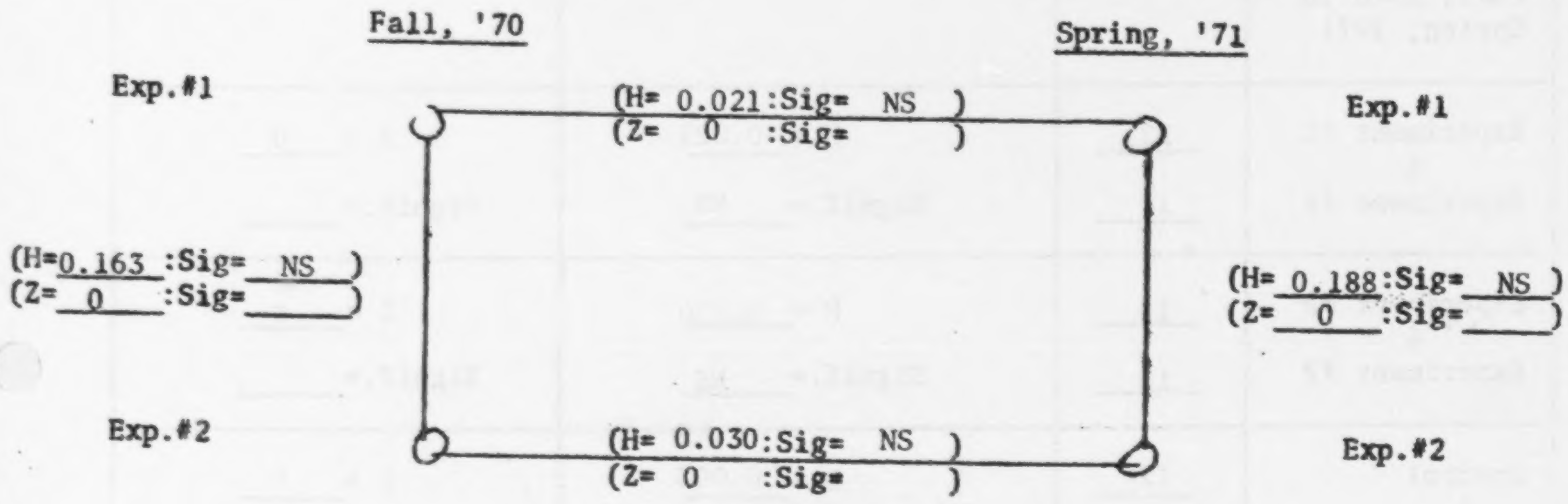
CONTENT ANALYSIS DATA

Variable 53 : Planning Integral Part: Need for Planning

SCHEMATIC PRESENTATIONS OF ANALYSIS


Fall, '70
Spring, '71
Exp.#1
(H= 0.021 :Sig= NS)
(Z= 0 :Sig=)
Exp.#1
(H= 1.470 :Sig= NS)
(Z= 0 :Sig=)
(H= 1.470 :Sig NS)
(Z= 0 :Sig)
Control
(H= 0.003 :Sig= NS)
(Z= 0 :Sig=)
Control


Fall, '70
Spring, '71
Exp.#2
(H= 0.030 :Sig= NS)
(Z= 0 :Sig=)
Exp.#2
(H= 3.203 :Sig= NS)
(Z= 0 :Sig=)
(H= 1.688 :Sig= NS)
(Z= 0 :Sig=)
Control
(H= 0.003 :Sig= NS)
(Z= 0 :Sig=)
Control


Fall, '70
Spring, '71
Exp.#1
(H= 0.021 :Sig= NS)
(Z= 0 :Sig=)
Exp.#1
(H=0.163 :Sig= NS)
(Z= 0 :Sig=)
(H= 0.188 :Sig= NS)
(Z= 0 :Sig=)
Exp.#2
(H= 0.030 :Sig= NS)
(Z= 0 :Sig=)
Exp.#2

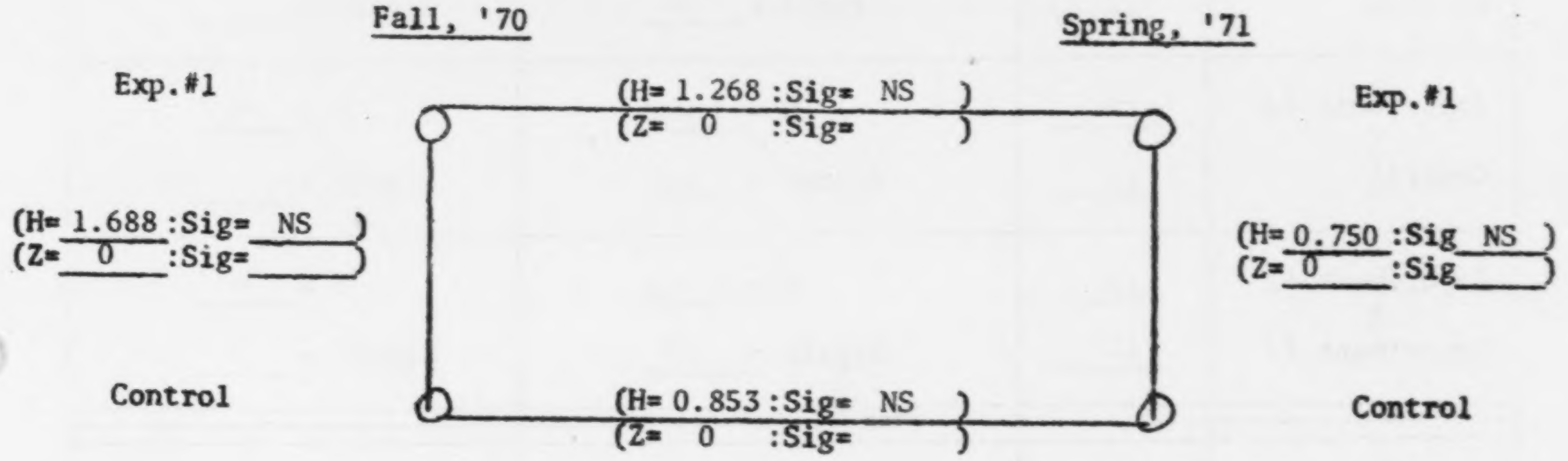
Variable 53 : Planning Integral Part: Need for Planning

Fall, 1970	Sample Size (N)	Kruskal-Wallis One-Way Analysis of Variance	Binomial Test of Proportions
Experiment #1 & Control	12 12	H = 1.470 Signif.= NS	Z = 0 Signif.=
Experiment #2 & Control	12 12	H = 3.203 Signif.= NS	Z = 0 Signif.=
Experiment #1 & Experiment #2	12 12	H = 0.163 Signif.= NS	Z = 0 Signif.=
Spring, 1971			
Experiment #1 & Control	12 12	H = 1.470 Signif.= NS	Z = 0 Signif.=
Experiment #2 & Control	12 12	H = 1.688 Signif.= NS	Z = 0 Signif.=
Experiment #1 & Experiment #2	12 12	H = 0.188 Signif.= NS	Z = 0 Signif.=
Fall, 1970 to Spring, 1971			
Experiment #1 & Experiment #1	12 12	H = 0.021 Signif.= NS	Z = 0 Signif.=
Experiment #2 & Experiment #2	12 12	H = 0.030 Signif.= NS	Z = 0 Signif.=
Control & Control	12 12	H = 0.003 Signif.= NS	Z = 0 Signif.=

CONTENT ANALYSIS DATA

Variable 54 : Planning Integral Part: Emergence of Planning

SCHEMATIC PRESENTATIONS OF ANALYSIS



Fall, '70

Spring, '71

Exp.#1

(H= 1.268 :Sig= NS)
(Z= 0 :Sig=)

Exp.#1

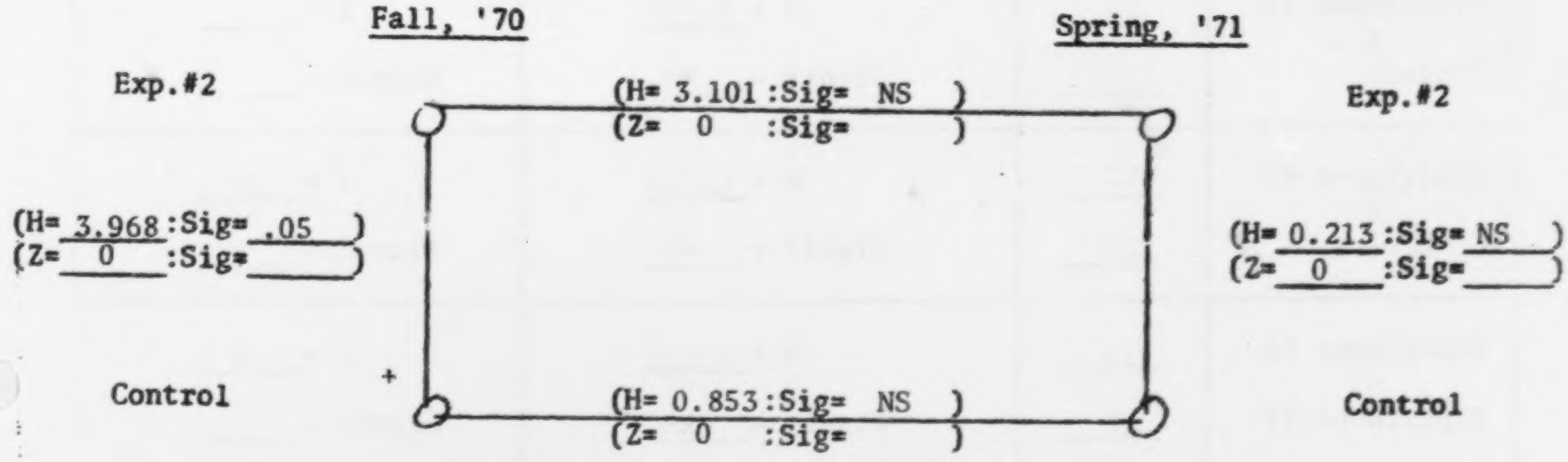
(H= 1.688 :Sig= NS)
(Z= 0 :Sig=)

(H= 0.750 :Sig NS)
(Z= 0 :Sig)

Control

(H= 0.853 :Sig= NS)
(Z= 0 :Sig=)

Control



Fall, '70

Spring, '71

Exp.#2

(H= 3.101 :Sig= NS)
(Z= 0 :Sig=)

Exp.#2

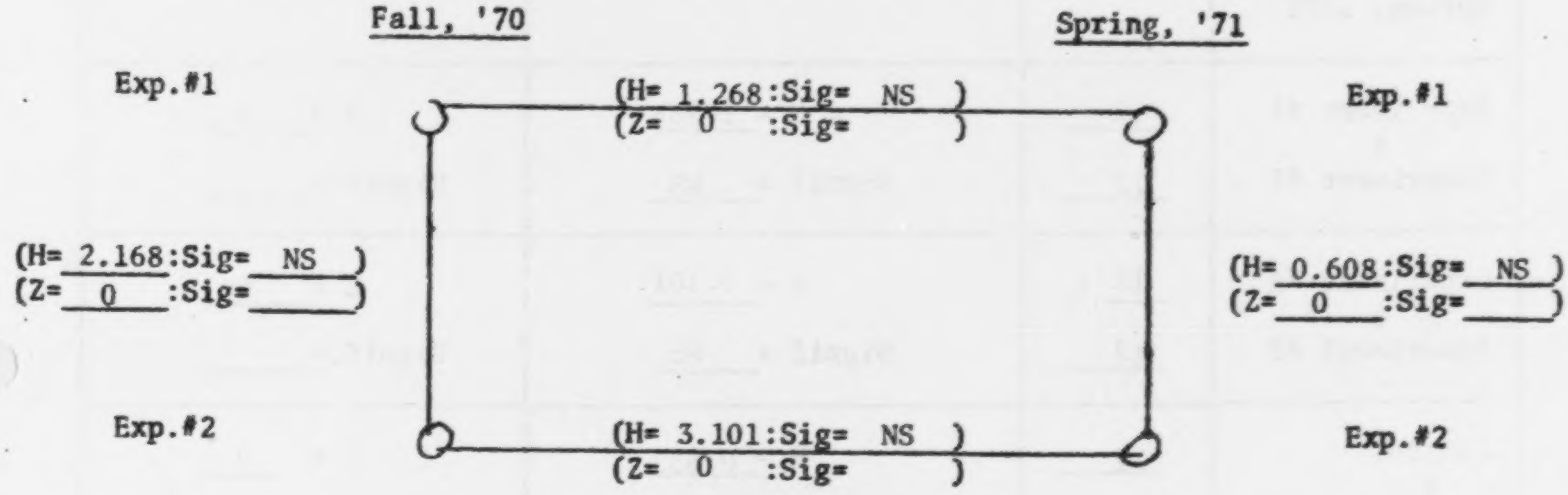
(H= 3.968 :Sig= .05)
(Z= 0 :Sig=)

(H= 0.213 :Sig= NS)
(Z= 0 :Sig=)

Control

(H= 0.853 :Sig= NS)
(Z= 0 :Sig=)

Control



Fall, '70

Spring, '71

Exp.#1

(H= 1.268 :Sig= NS)
(Z= 0 :Sig=)

Exp.#1

(H= 2.168 :Sig= NS)
(Z= 0 :Sig=)

(H= 0.608 :Sig= NS)
(Z= 0 :Sig=)

Exp.#2

(H= 3.101 :Sig= NS)
(Z= 0 :Sig=)

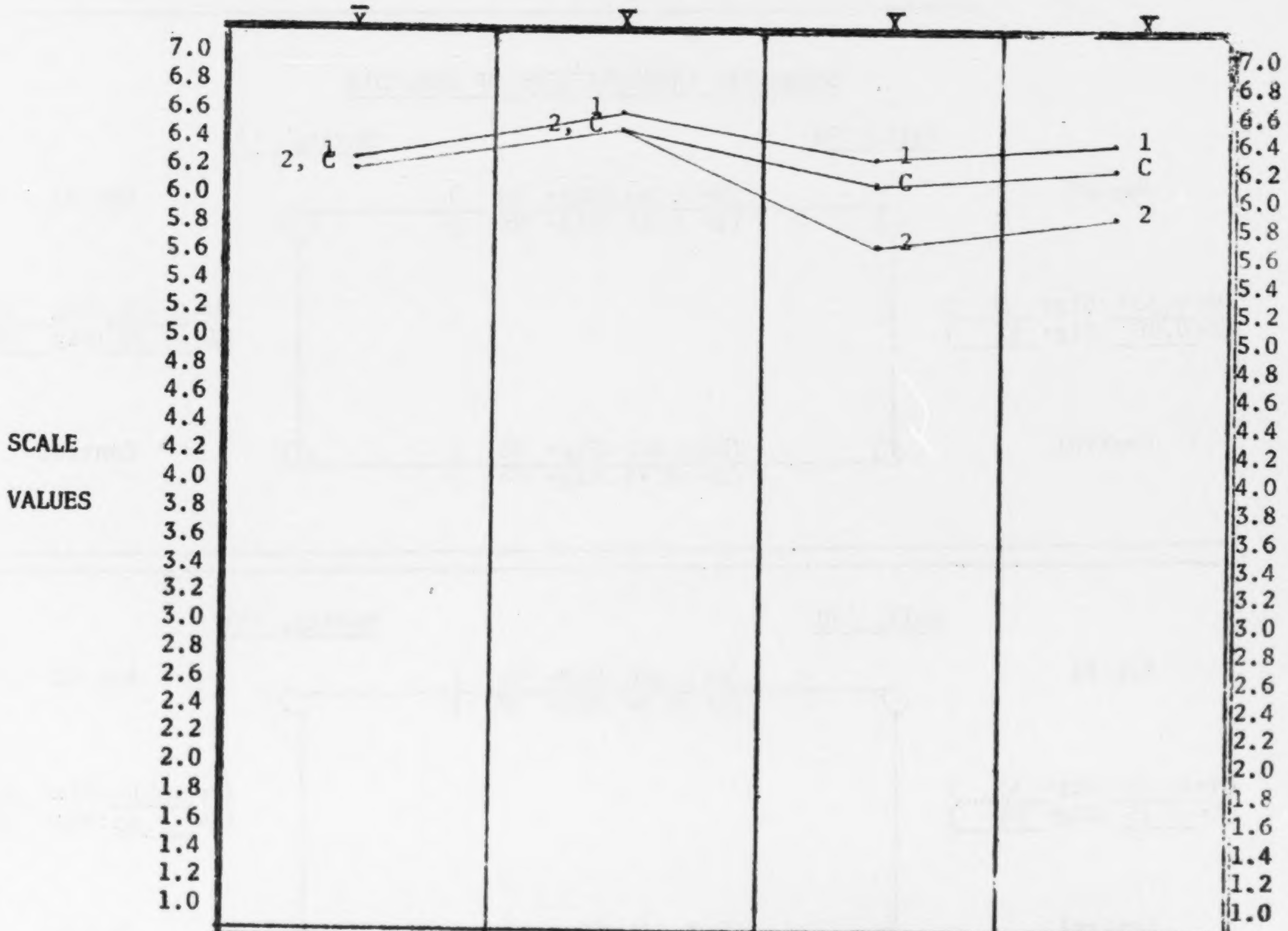
Exp.#2

Variable 54 : Planning Integral Part: Emergence of Planning

Fall, 1970	Sample Size (N)	Kruskal-Wallis One-Way Analysis of Variance	Binomial Test of Proportions
Experiment #1 & Control	12 12	H = 1.688 Signif.= NS	Z = 0 Signif.=
Experiment #2 & Control	12 12	H = 3.968 Signif.= .05	Z = 0 Signif.=
Experiment #1 & Experiment #2	12 12	H = 2.168 Signif.= NS	Z = 0 Signif.=
Spring, 1971			
Experiment #1 & Control	12 12	H = 0.750 Signif.= NS	Z = 0 Signif.=
Experiment #2 & Control	12 12	H = 0.213 Signif.= NS	Z = 0 Signif.=
Experiment #1 & Experiment #2	12 12	H = 0.608 Signif.= NS	Z = 0 Signif.=
Fall, 1970 to Spring, 1971			
Experiment #1 & Experiment #1	12 12	H = 1.268 Signif.= NS	Z = 0 Signif.=
Experiment #2 & Experiment #2	12 12	H = 3.101 Signif.= NS	Z = 0 Signif.=
Control & Control	12 12	H = 0.853 Signif.= NS	Z = 0 Signif.=

Questionnaire Data

Variable # 39 : As I see it, planning is an integral part of running the State's schools



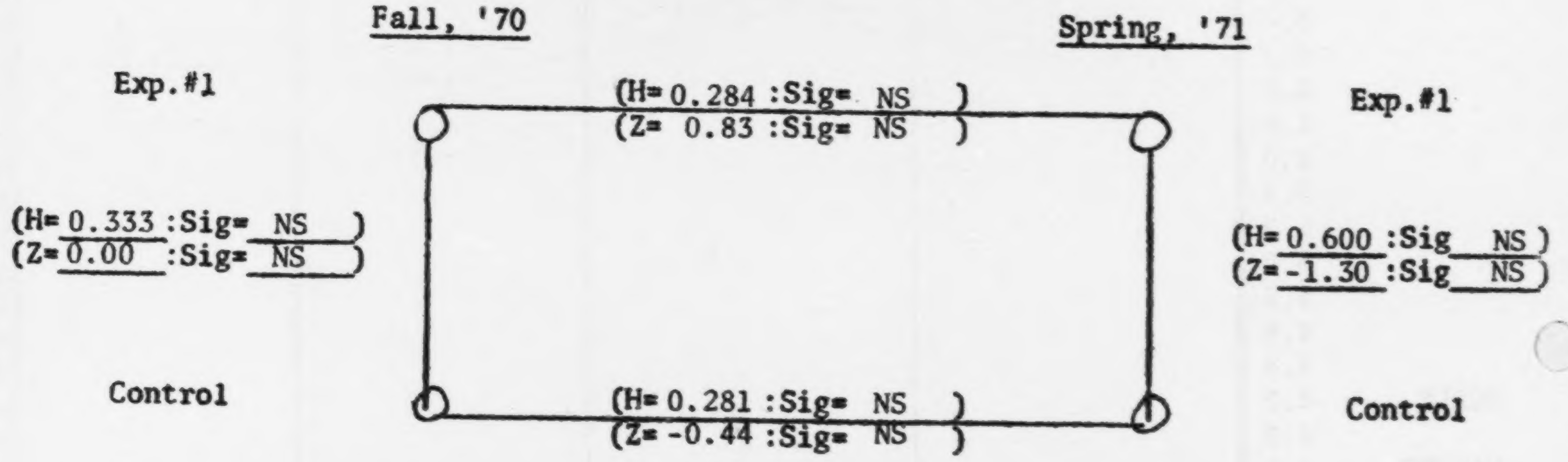
	Fall '69 T_1			Fall '70 T_2			Spring '71 T_3			Fall '71 T_4		
	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD
Experiment (#1)	39	6.282	0.999	39	6.564	0.718	73	6.342	0.961	73	6.384	0.937
Experiment (#2)	59	6.153	1.400	60	6.533	0.853	52	5.712	1.661	53	5.857	1.209
Control (C)	65	6.215	1.152	66	6.500	0.662	61	6.131	1.310	61	6.213	1.185
Total	163			165			186			187		

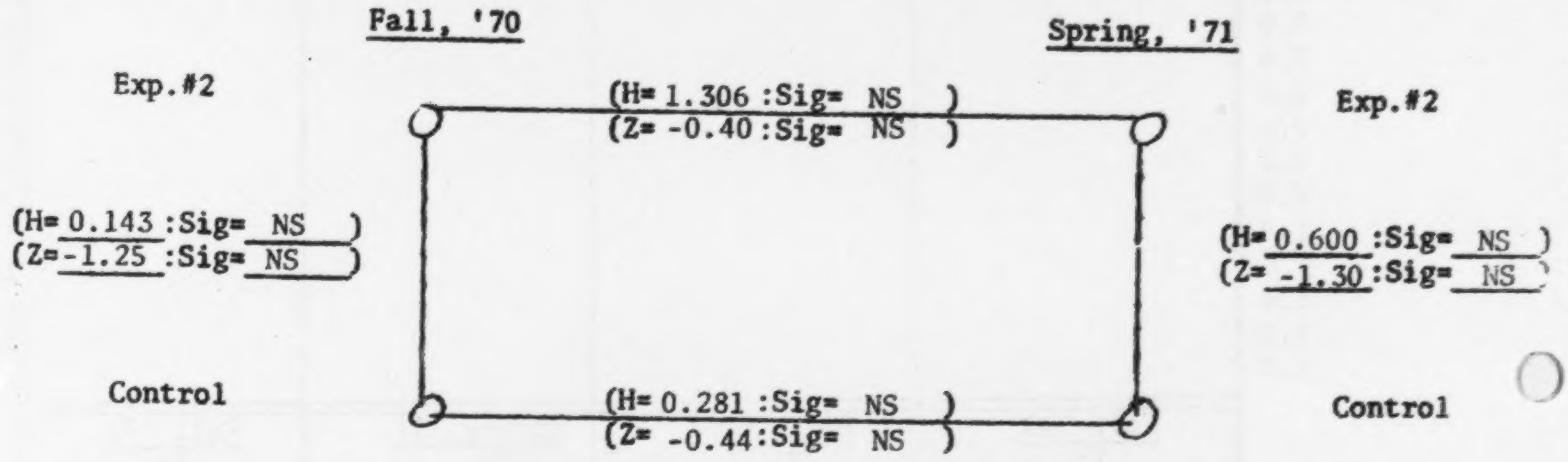
TWO-WAY Anal. of Variance		T_1 & T_2		T_2 & T_3		T_3 & T_4	
		F	Signif.	F	Signif.	F	Signif.
Experiment #1 W/ Control State	Col.	0.251	NS	1.156	NS	2.018	NS
	Row	4.706	.05	5.315	.05	0.210	NS
Experiment #2 W/ Control State	Col.	0.012	NS	1.650	NS	3.119	NS
	Row	6.287	.05	15.679	.001	1.069	NS

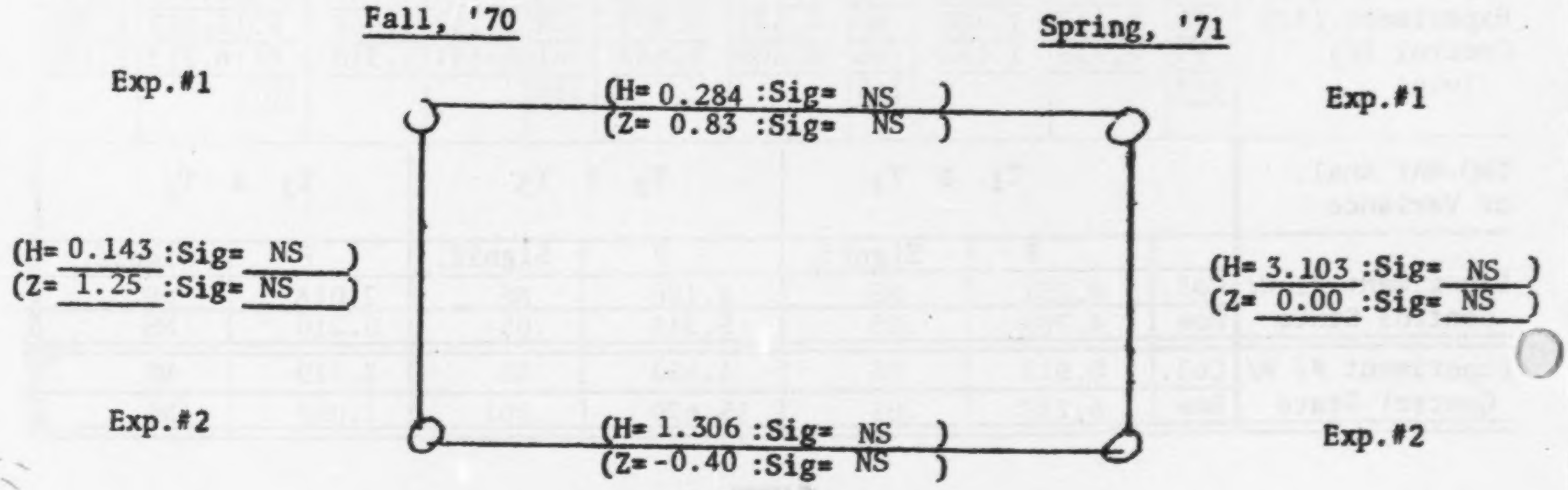
CONTENT ANALYSIS DATA

Variable 41 : Roadblock: Employer interpersonal skills

SCHEMATIC PRESENTATIONS OF ANALYSIS


Fall, '70
Spring, '71
Exp.#1
(H= 0.284 :Sig= NS)
(Z= 0.83 :Sig= NS)
Exp.#1
(H= 0.333 :Sig= NS)
(Z= 0.00 :Sig= NS)
(H= 0.600 :Sig NS)
(Z= -1.30 :Sig NS)
Control
(H= 0.281 :Sig= NS)
(Z= -0.44 :Sig= NS)
Control


Fall, '70
Spring, '71
Exp.#2
(H= 1.306 :Sig= NS)
(Z= -0.40 :Sig= NS)
Exp.#2
(H= 0.143 :Sig= NS)
(Z= -1.25 :Sig= NS)
(H= 0.600 :Sig= NS)
(Z= -1.30 :Sig= NS)
Control
(H= 0.281 :Sig= NS)
(Z= -0.44 :Sig= NS)
Control


Fall, '70
Spring, '71
Exp.#1
(H= 0.284 :Sig= NS)
(Z= 0.83 :Sig= NS)
Exp.#1
(H= 0.143 :Sig= NS)
(Z= 1.25 :Sig= NS)
(H= 3.103 :Sig= NS)
(Z= 0.00 :Sig= NS)
Exp.#2
(H= 1.306 :Sig= NS)
(Z= -0.40 :Sig= NS)
Exp.#2

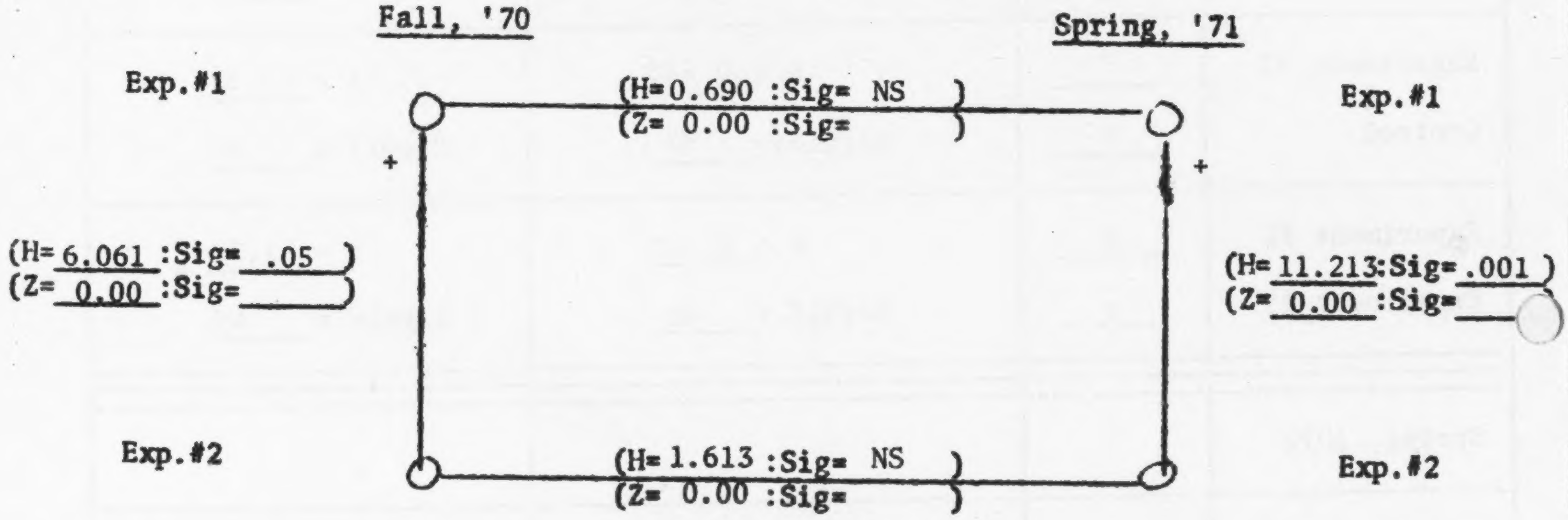
Variable 41 : Roadblock: Employee interpersonal skills

Fall, 1970	Sample Size (N)	Kruskal-Wallis One-Way Analysis of Variance	Binomial Test of Proportions
Experiment #1 & Control	4 4	H = 0.333 Signif.= NS	Z = 0.00 Signif.= NS
Experiment #2 & Control	7 4	H = 0.143 Signif.= NS	Z = -1.25 Signif.= NS
Experiment #1 & Experiment #2	4 8	H = 0.143 Signif.= NS	Z = 1.25 Signif.= NS
Spring, 1971			
Experiment #1 & Control	6 3	H = 0.600 Signif.= NS	Z = -1.30 Signif.= NS
Experiment #2 & Control	6 3	H = 0.600 Signif.= NS	Z = -1.30 Signif.= NS
Experiment #1 & Experiment #2	6 6	H = 3.103 Signif.= NS	Z = 0.00 Signif.= NS
Fall, 1970 to Spring, 1971			
Experiment #1 & Experiment #1	4 6	H = 0.284 Signif.= NS	Z = 0.83 Signif.= NS
Experiment #2 & Experiment #2	7 6	H = 1.306 Signif.= NS	Z = -0.40 Signif.= NS
Control & Control	4 3	H = 0.281 Signif.= NS	Z = -0.44 Signif.= NS

CONTENT ANALYSIS DATA

Variable 13 : What Is the Attitude of Your Boss Toward the AMA Training Program

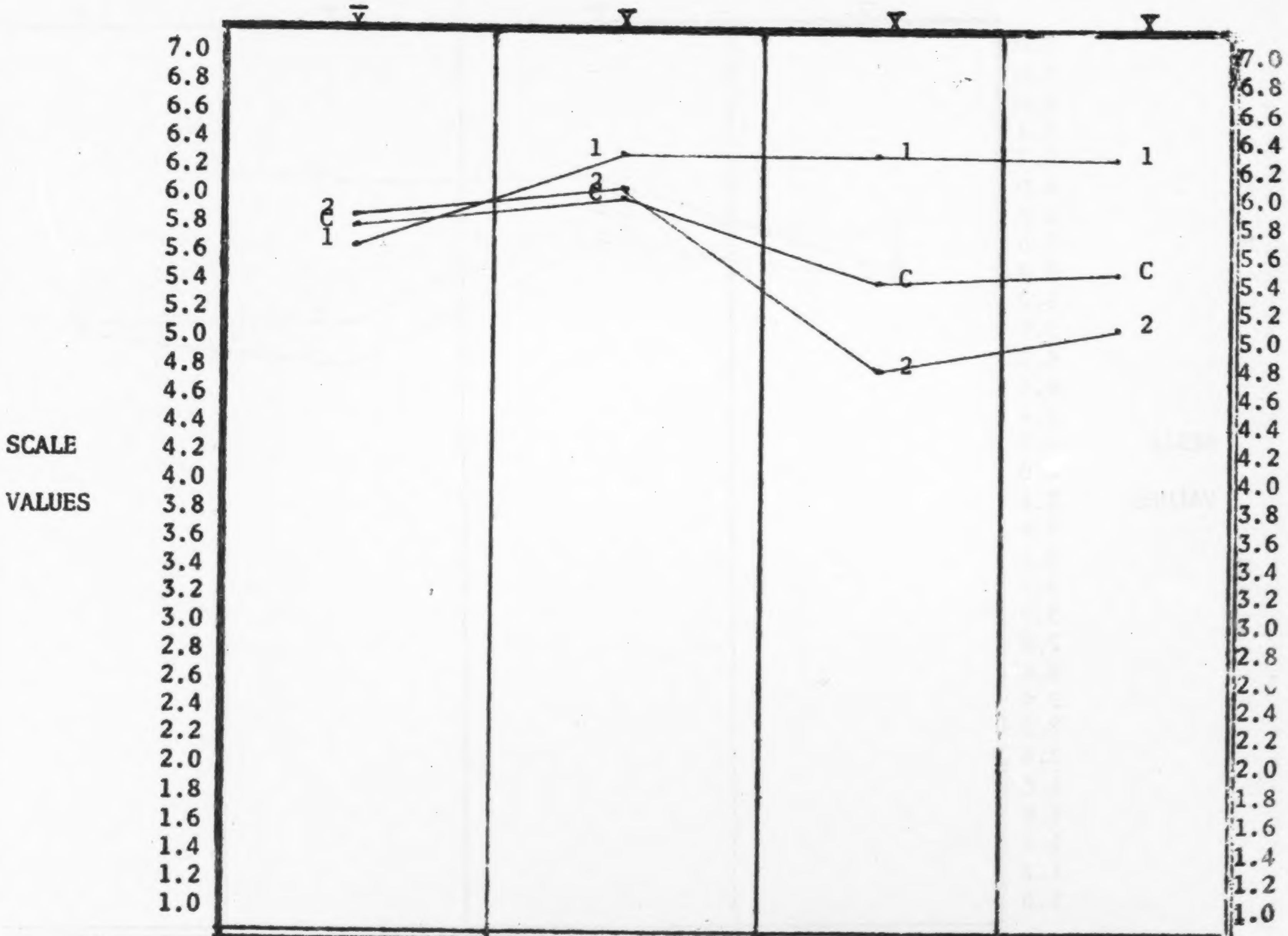
SCHEMATIC PRESENTATIONS OF ANALYSIS


Fall, '70
Spring, '71
Exp.#1
(H=0.690 :Sig= NS)
(Z= 0.00 :Sig=)
Exp.#1
+
+
(H=6.061 :Sig= .05)
(Z= 0.00 :Sig=)
(H=11.213:Sig=.001)
(Z= 0.00 :Sig=)
Exp.#2
(H=1.613 :Sig= NS)
(Z= 0.00 :Sig=)
Exp.#2

FALL, 1970	Sample Size (N)	Kruskal-Wallis One-Way Analysis of Variance	Binomial Test of Proportions
Experiment #1 & Experiment #2	11 12	H = 6.061 Signif.= .05	Z = 0.00 Signif.=
SPRING, 1971			
Experiment #1 & Experiment #2	12 12	H = 11.213 Signif.= .001	Z = 0.00 Signif.=
FALL, 1970 to SPRING, 1971			
Experiment #1 & Experiment #1	11 12	H = 0.690 Signif.= NS	Z = 0.00 Signif.=
Experiment #2 & Experiment #2	12 12	H = 1.613 Signif.= NS	Z = 0.00 Signif.=

Questionnaire Data

Variable # 30 : My manager makes it clear he is committed to the success of our projects

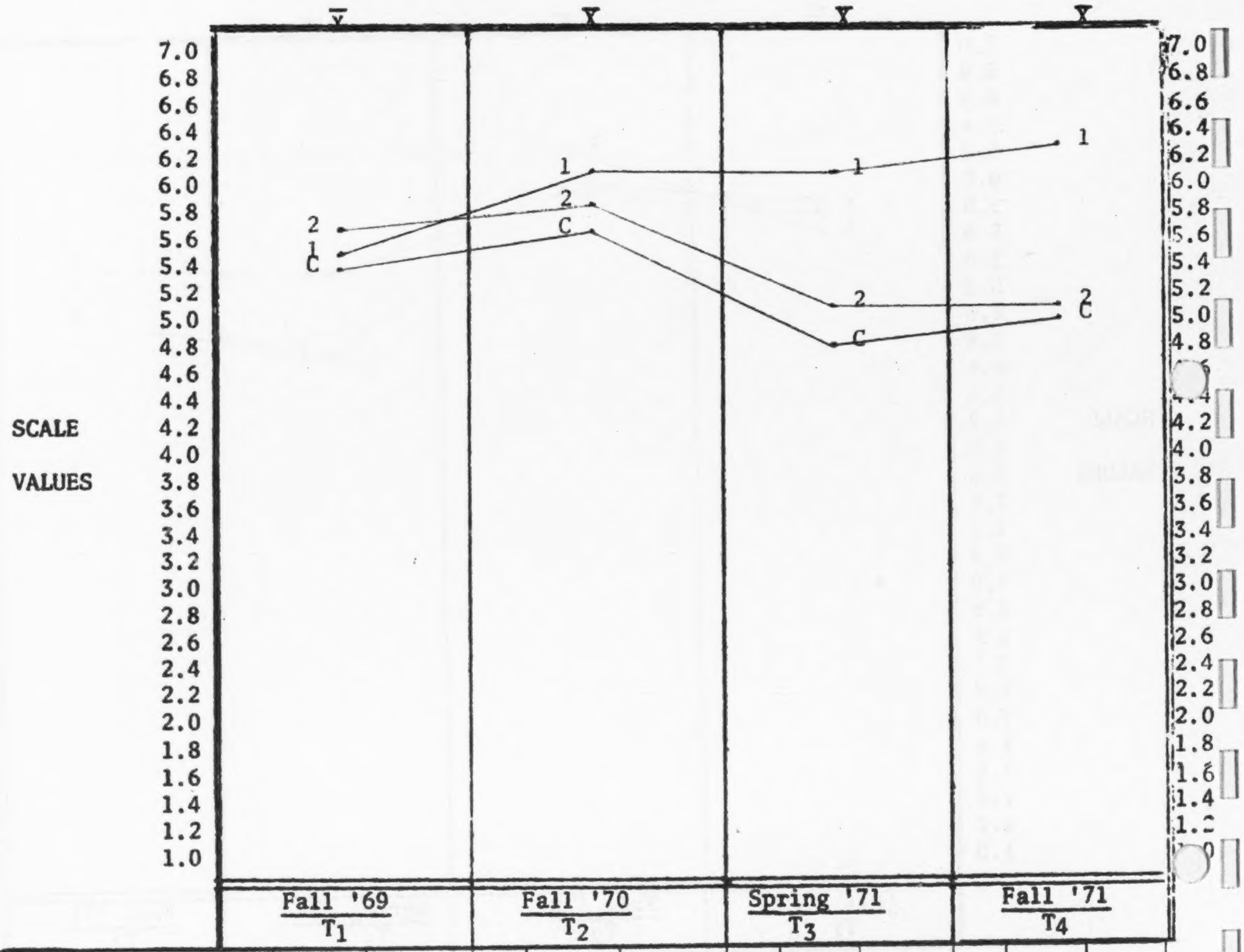


	Fall '69 T_1			Fall '70 T_2			Spring '71 T_3			Fall '71 T_4		
	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD
Experiment (#1)	39	5.692	1.239	39	6.256	0.938	73	6.260	0.850	73	6.288	0.857
Experiment (#2)	60	5.850	1.102	60	6.100	0.933	52	4.846	1.539	53	5.113	1.527
Control (C)	65	5.815	1.298	66	6.030	1.007	61	5.393	1.497	61	5.492	1.468
Total	164			165			186			187		

TWO-WAY Anal. of Variance		T_1 & T_2		T_2 & T_3		T_3 & T_4	
		F	Signif.	F	Signif.	F	Signif.
Experiment #1 W/ Control State	Col.	0.100	NS	13.847	.001	32.880	.001
	Row	5.728	.05	4.645	.05	0.188	NS
Experiment #2 W/ Control State	Col.	0.142	NS	2.133	NS	5.331	.05
	Row	2.817	NS	33.424	.001	0.830	NS

Questionnaire Data

Variable # 14 : My manager encourages and supports innovation



	N	X̄	SD	N	X̄	SD	N	X̄	SD	N	X̄	SD
Experiment (#1)	39	5.538	1.335	39	6.051	0.999	73	6.137	1.045	73	6.274	0.917
Experiment (#2)	60	5.650	1.300	60	5.900	1.189	52	5.135	1.534	53	5.057	1.610
Control (C)	65	5.415	1.509	66	5.712	1.274	61	4.836	1.675	61	5.000	1.653
Total	164			165			186			187		

TWO-WAY Anal. of Variance		T_1 & T_2		T_2 & T_3		T_3 & T_4	
		F	Signif.	F	Signif.	F	Signif.
Experiment #1 W/ Control State	Col.	1.500	NS	22.841	.001	61.681	.001
	Row	4.601	.05	5.304	.05	0.842	NS
Experiment #2 W/ Control State	Col.	1.589	NS	1.727	NS	0.676	NS
	Row	2.661	NS	19.668	.001	0.040	NS

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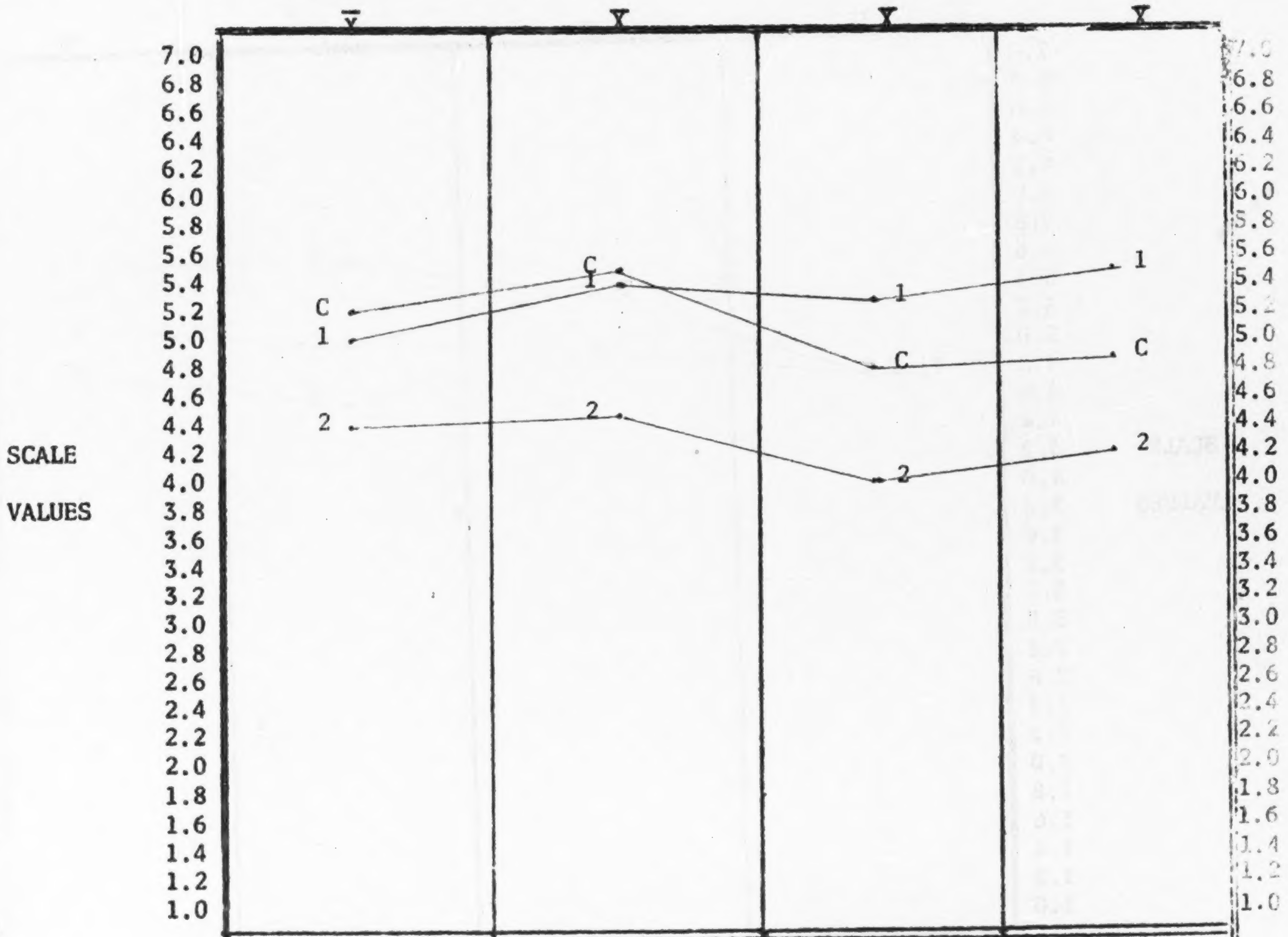
Questionnaire Data

Variable # 11 : Based on Information I have received from my boss I know if I am measuring up in my job.



	Fall '69 T_1			Fall '70 T_2			Spring '71 T_3			Fall '71 T_4		
	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD
Experiment (#1)	39	4.974	1.347	39	5.436	1.046	73	5.342	1.387	73	5.534	1.281
Experiment (#2)	60	4.367	1.707	60	4.534	1.751	52	3.981	1.743	53	4.208	1.769
Control (C)	65	5.246	1.511	66	5.500	1.256	61	4.836	1.551	61	4.934	1.611
Total	164			165			186			187		

TWO-WAY Anal. of Variance		T_1 & T_2		T_2 & T_3		T_3 & T_4	
		F	Signif.	F	Signif.	F	Signif.
Experiment #1 W/	Col.	0.787	NS	1.519	NS	9.642	.01
Control State	Row	3.571	NS	4.455	.05	0.663	NS
Experiment #2 W/	Col.	21.916	.001	19.848	.001	12.747	.001
Control State	Row	1.137	NS	8.848	.01	0.538	NS

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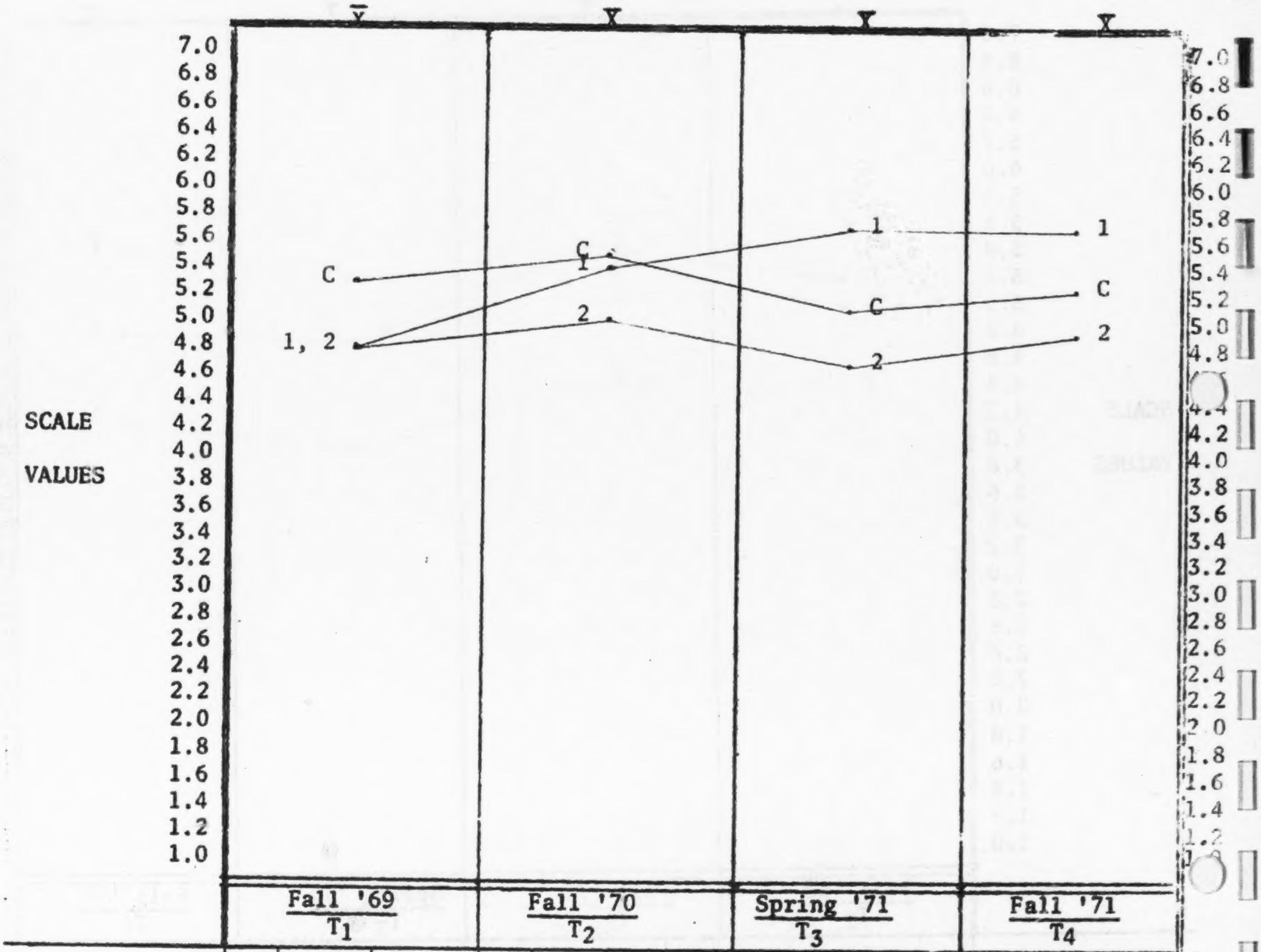
Questionnaire Data

Variable # 33 : Higher managements to the problems which reach them is fair

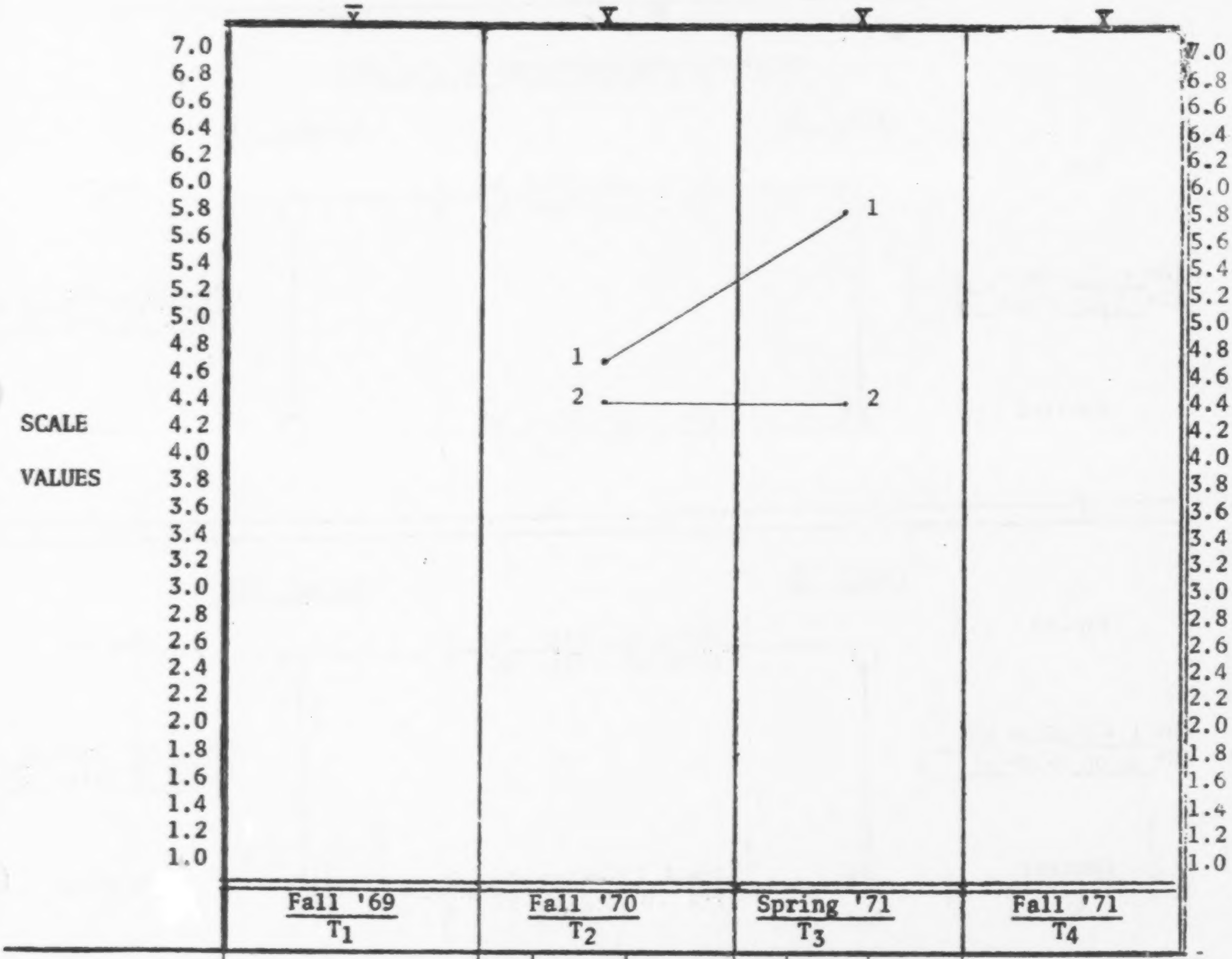


	Fall '69 T_1			Fall '70 T_2			Spring '71 T_3			Fall '71 T_4		
	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD	N	$\overline{X}$	SD
Experiment (#1)	39	4.846	1.694	39	5.436	1.535	71	5.677	1.180	71	5.704	1.176
Experiment (#2)	60	4.833	1.199	60	4.950	1.512	49	4.673	1.420	49	4.857	1.354
Control (C)	64	5.328	1.334	65	5.492	1.002	58	5.138	1.420	59	5.237	1.343
Total	163			164			178			179		

TWO-WAY Anal. of Variance		T_1 & T_2		T_2 & T_3		T_3 & T_4	
		F	Signif.	F	Signif.	F	Signif.
Experiment #1 W/ Control State	Col.	1.907	NS	2.005	NS	9.980	.01
	Row	3.739	NS	0.113	NS	0.161	NS
Experiment #2 W/ Control State	Col.	9.234	.01	8.072	.01	4.962	.05
	Row	0.677	NS	3.170	NS	0.557	NS

Questionnaire Data

Variable # 7 : My boss has expressed belief that the American Management Association's training program will be helpful.



	Fall '69 T_1	Fall '70 T_2 N	$\overline{X}$	SD	Spring '71 T_3 N	$\overline{X}$	SD	Fall '71 T_4
Experiment (#1)		38	4.737	1.996	72	5.764	1.379	
Experiment (#2)		60	4.367	2.099	52	4.423	1.649	
Total		98			124			

TWO-WAY Anal. of Variance — T_2 & T_3

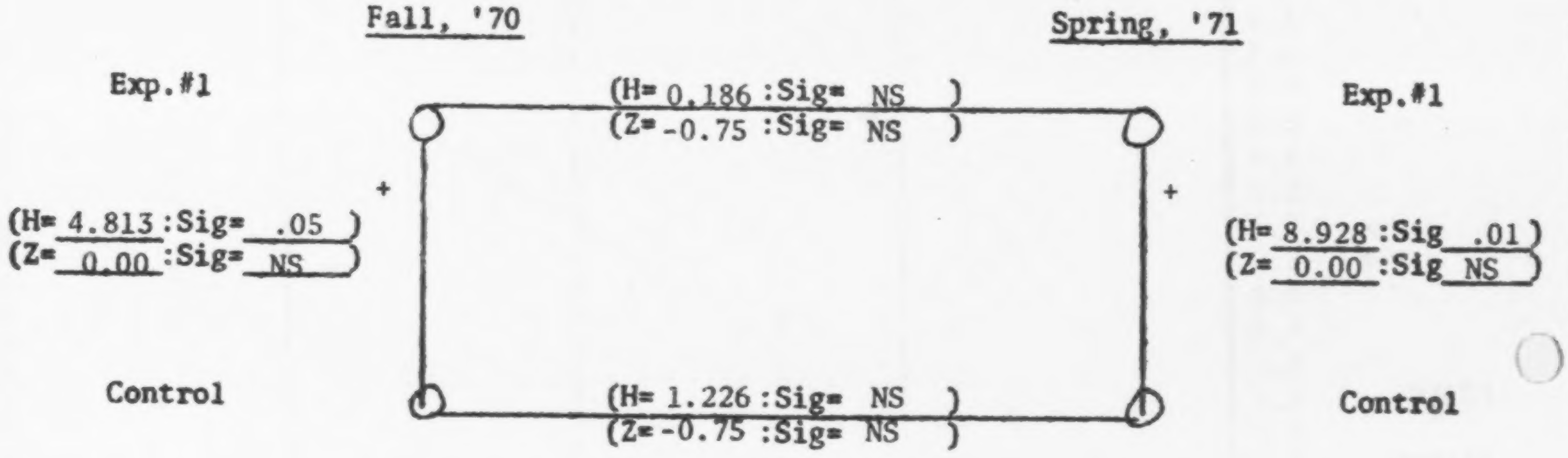
		F	Signif.
Experiment #1 W/ Experiment #2	Col.	12.315	.001
	Row	4.938	.05

xl

CONTENT ANALYSIS DATA

Variable 34 : Involvement: How are major decisions made?

SCHEMATIC PRESENTATIONS OF ANALYSIS



Fall, '70

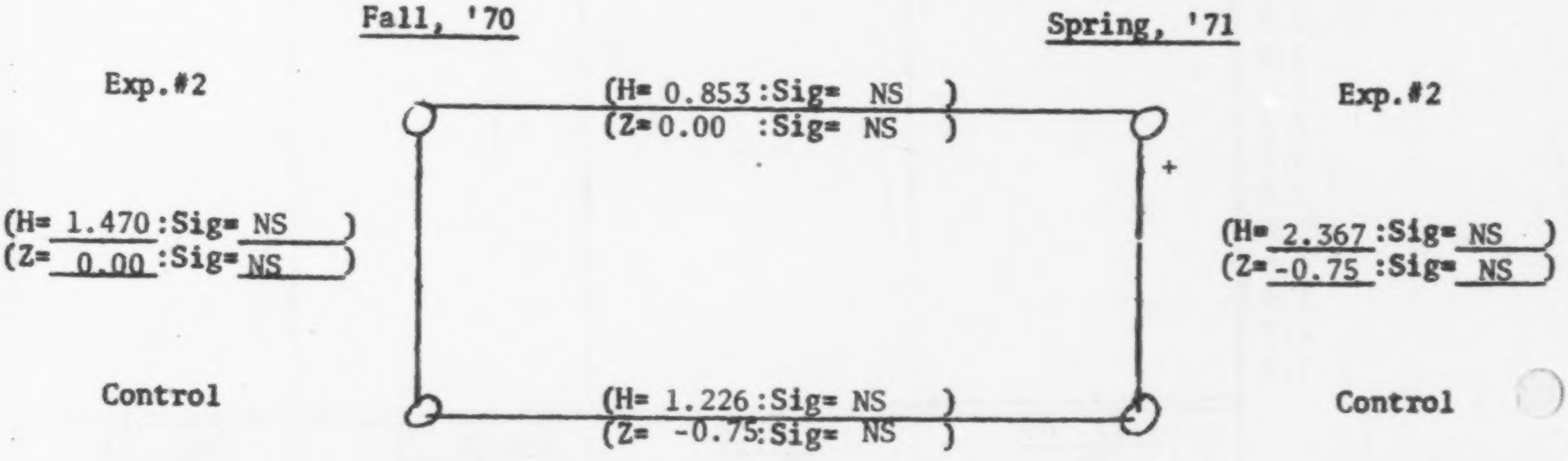
Spring, '71

Exp.#1 (Fall, '70) — Exp.#1 (Spring, '71): (H= 0.186 :Sig= NS) (Z= -0.75 :Sig= NS)

Exp.#1 — Control (Fall, '70) +: (H= 4.813 :Sig= .05) (Z= 0.00 :Sig= NS)

Exp.#1 — Control (Spring, '71) +: (H= 8.928 :Sig .01) (Z= 0.00 :Sig NS)

Control (Fall, '70) — Control (Spring, '71): (H= 1.226 :Sig= NS) (Z= -0.75 :Sig= NS)



Fall, '70

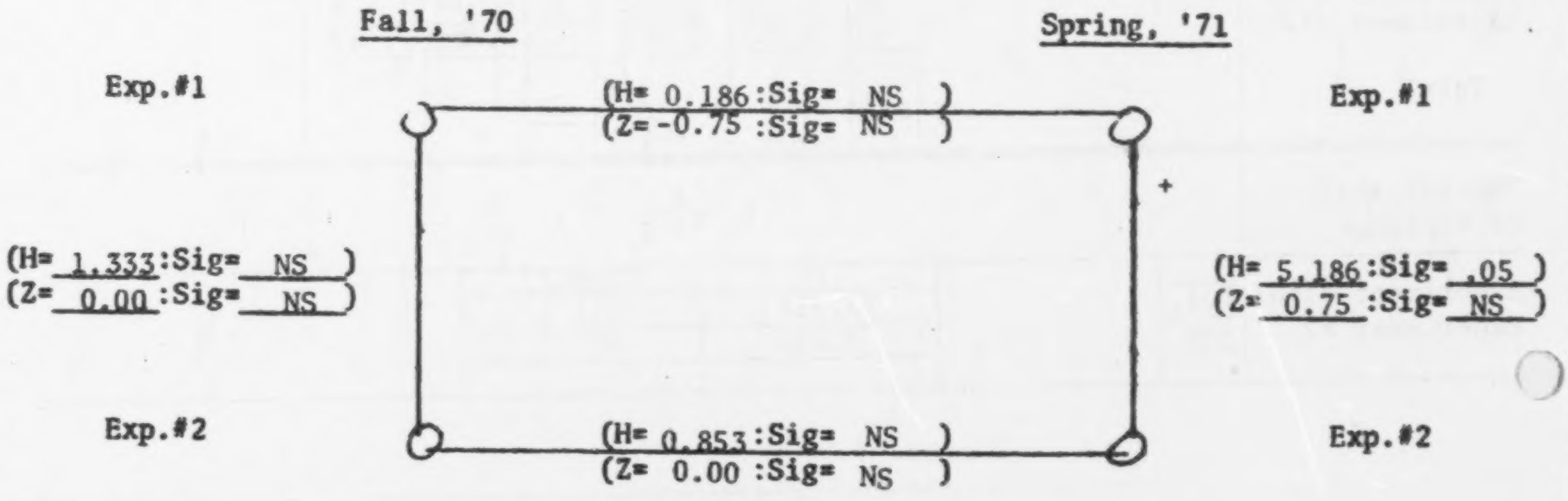
Spring, '71

Exp.#2 (Fall, '70) — Exp.#2 (Spring, '71): (H= 0.853 :Sig= NS) (Z= 0.00 :Sig= NS)

Exp.#2 — Control (Fall, '70): (H= 1.470 :Sig= NS) (Z= 0.00 :Sig= NS)

Exp.#2 — Control (Spring, '71) +: (H= 2.367 :Sig= NS) (Z= -0.75 :Sig= NS)

Control (Fall, '70) — Control (Spring, '71): (H= 1.226 :Sig= NS) (Z= -0.75 :Sig= NS)



Fall, '70

Spring, '71

Exp.#1 (Fall, '70) — Exp.#1 (Spring, '71): (H= 0.186 :Sig= NS) (Z= -0.75 :Sig= NS)

Exp.#1 — Exp.#2 (Fall, '70): (H= 1.333 :Sig= NS) (Z= 0.00 :Sig= NS)

Exp.#1 — Exp.#2 (Spring, '71) +: (H= 5.186 :Sig= .05) (Z= 0.75 :Sig= NS)

Exp.#2 (Fall, '70) — Exp.#2 (Spring, '71): (H= 0.853 :Sig= NS) (Z= 0.00 :Sig= NS)

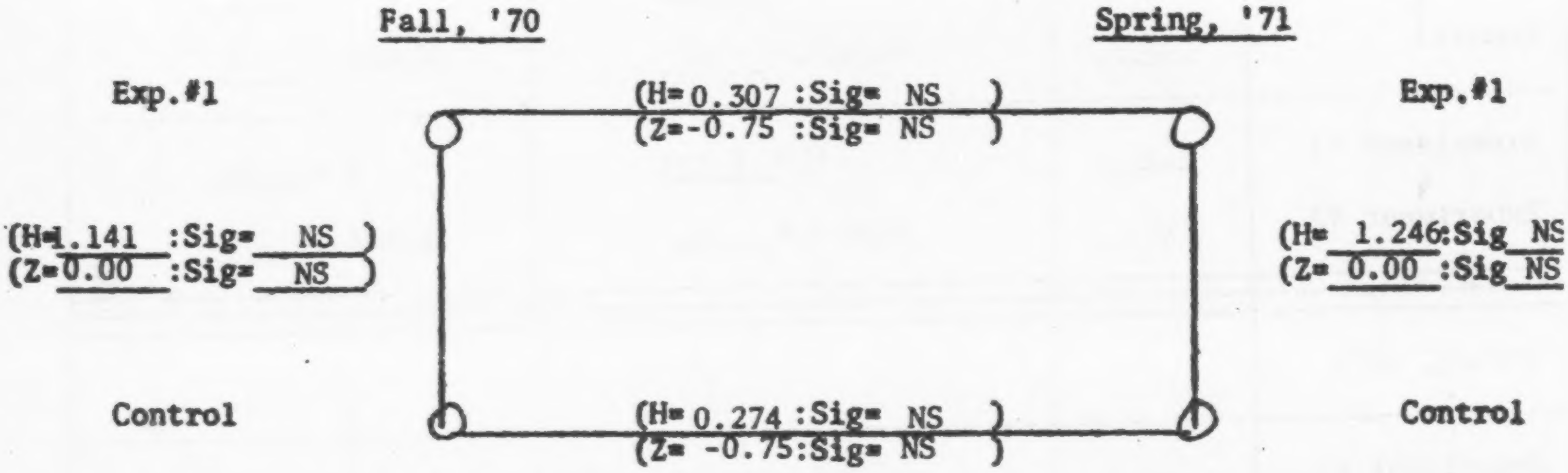
Variable 34 : Involvement: How are major decisions made?

Fall, 1970	Sample Size (N)	Kruskal-Wallis One-Way Analysis of Variance	Binomial Test of Proportions
Experiment #1 & Control	12 12	H = 4.813 Signif.= .05	Z = 0.00 Signif.= NS
Experiment #2 & Control	12 12	H = 1.470 Signif.= NS	Z = 0.00 Signif.= NS
Experiment #1 & Experiment #2	12 12	H = 1.333 Signif.= NS	Z = 0.00 Signif.= NS
Spring, 1971			
Experiment #1 & Control	11 11	H = 8.928 Signif.= .01	Z = 0.00 Signif.= NS
Experiment #2 & Control	12 11	H = 2.367 Signif.= NS	Z = -0.75 Signif.= NS
Experiment #1 & Experiment #2	11 12	H = 5.186 Signif.= .05	Z = 0.75 Signif.= NS
Fall, 1970 to Spring, 1971			
Experiment #1 & Experiment #1	12 11	H = 0.186 Signif.= NS	Z = -0.75 Signif.= NS
Experiment #2 & Experiment #2	12 12	H = 0.853 Signif.= NS	Z = 0.00 Signif.= NS
Control & Control	12 11	H = 1.226 Signif.= NS	Z = -0.75 Signif.= NS

CONTENT ANALYSIS DATA

Variable 35 : Quality: How are major decisions made?

SCHEMATIC PRESENTATIONS OF ANALYSIS


Fall, '70

Spring, '71

Exp.#1

(H= 0.307 :Sig= NS)
(Z=-0.75 :Sig= NS)

Exp.#1

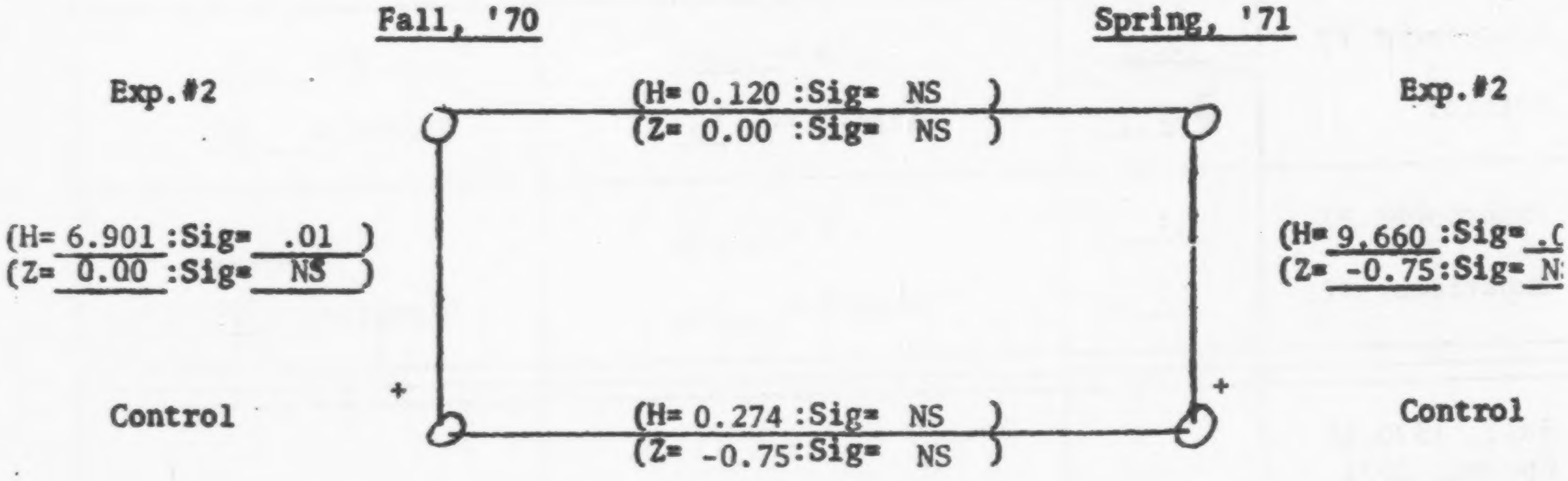
(H=1.141 :Sig= NS)
(Z=0.00 :Sig= NS)

(H= 1.246:Sig NS
(Z= 0.00 :Sig NS

Control

(H= 0.274 :Sig= NS)
(Z= -0.75:Sig= NS)

Control


Fall, '70

Spring, '71

Exp.#2

(H= 0.120 :Sig= NS)
(Z= 0.00 :Sig= NS)

Exp.#2

(H= 6.901 :Sig= .01)
(Z= 0.00 :Sig= NS)

(H= 9.660 :Sig= .
(Z= -0.75:Sig= N

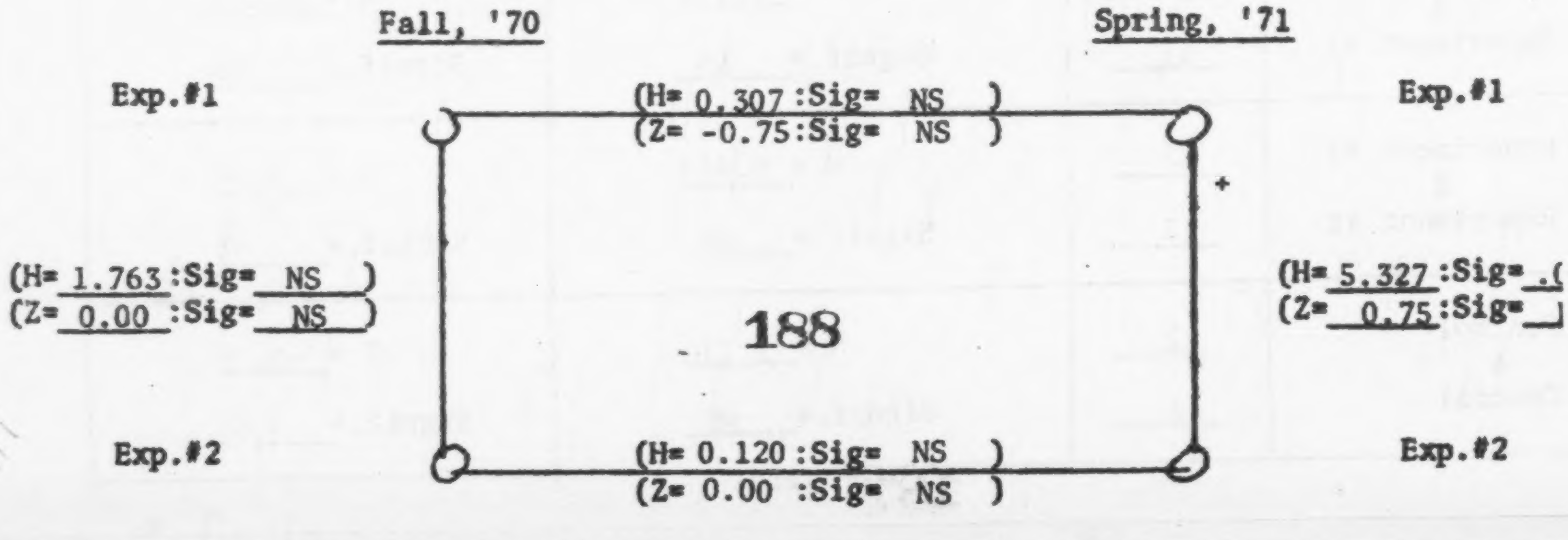
Control

+

(H= 0.274 :Sig= NS)
(Z= -0.75:Sig= NS)

+

Control


Fall, '70

Spring, '71

Exp.#1

(H= 0.307 :Sig= NS)
(Z= -0.75:Sig= NS)

Exp.#1

+

(H= 1.763 :Sig= NS)
(Z= 0.00 :Sig= NS)

(H= 5.327 :Sig= .
(Z= 0.75:Sig=

Exp.#2

(H= 0.120 :Sig= NS)
(Z= 0.00 :Sig= NS)

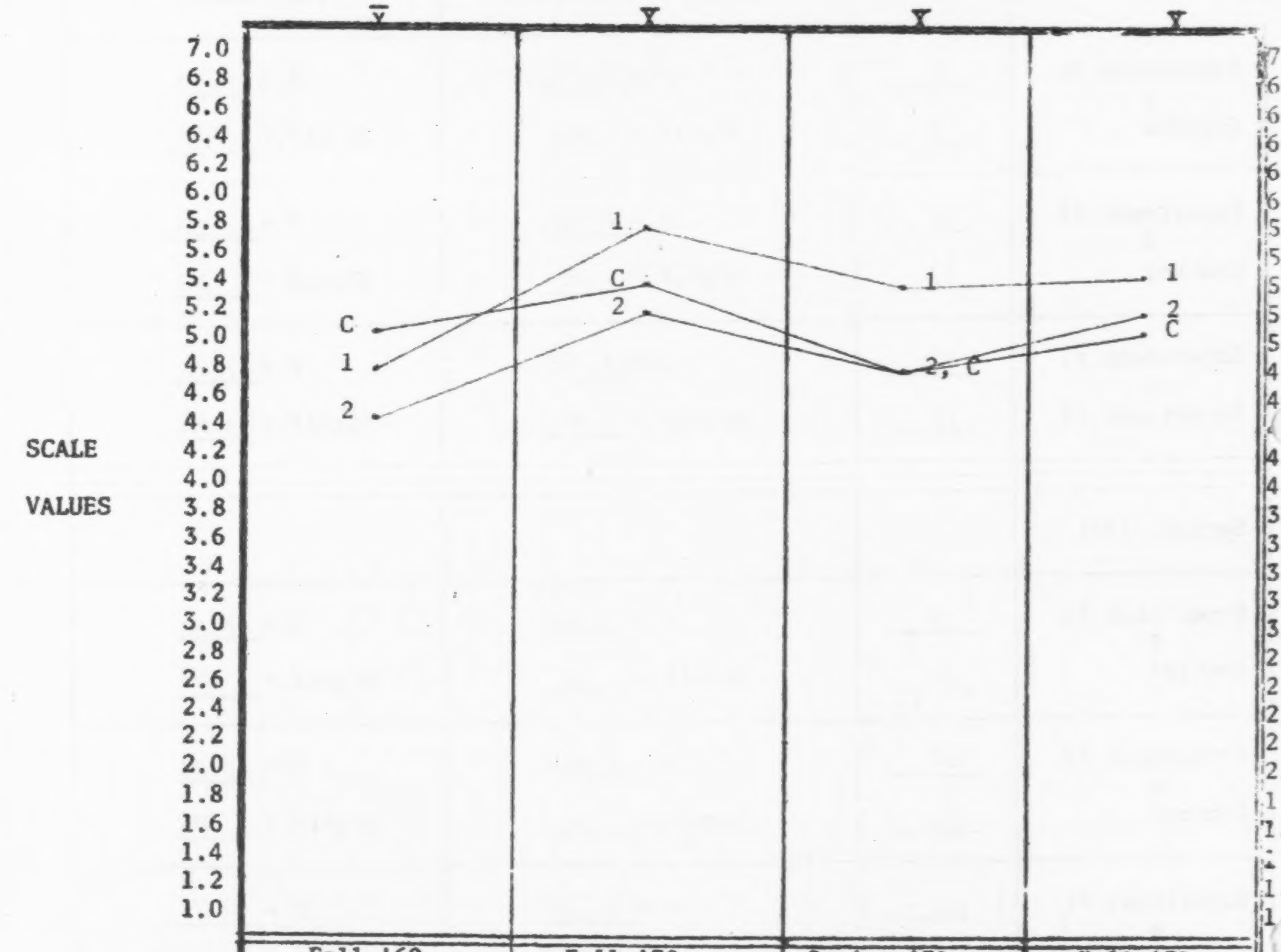
Exp.#2

Variable 35 : Quality: How are major decisions made?

Fall, 1970	Sample Size (N)	Kruskal-Wallis One-Way Analysis of Variance	Binomial Test of Proportions
Experiment #1 & Control	12 12	H = 1.141 Signif.= NS	Z = 0.00 Signif.= NS
Experiment #2 & Control	12 12	H = 6.901 Signif.= .01	Z = 0.00 Signif.= NS
Experiment #1 & Experiment #2	12 12	H = 1.763 Signif.= NS	Z = 0.00 Signif.= NS
Spring, 1971			
Experiment #1 & Control	11 11	H = 1.246 Signif.= NS	Z = 0.00 Signif.= NS
Experiment #2 & Control	12 11	H = 9.660 Signif.= .01	Z = -0.75 Signif.= NS
Experiment #1 & Experiment #2	11 12	H = 5.327 Signif.= .05	Z = 0.75 Signif.= NS
Fall, 1970 to Spring, 1971			
Experiment #1 & Experiment #1	12 11	H = 0.307 Signif.= NS	Z = -0.75 Signif.= NS
Experiment #2 & Experiment #2	12 12	H = 0.120 Signif.= NS	Z = 0.00 Signif.= NS
Control & Control	12 11	H = 0.274 Signif.= NS	Z = -0.75 Signif.= NS

Questionnaire Data

Variable # 23 : The people I work with participate appropriately in setting the goals of our work

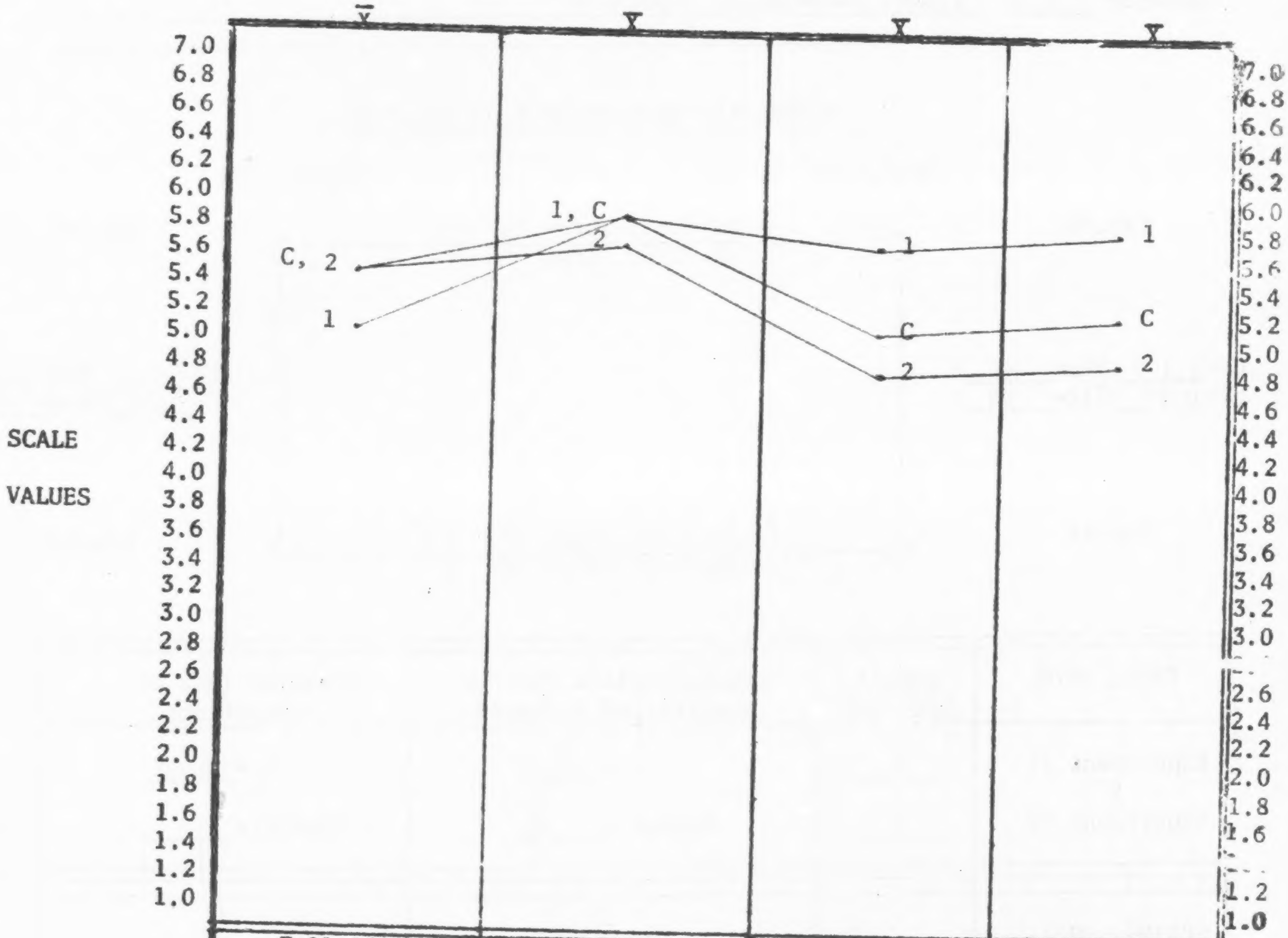


	Fall '69 T_1			Fall '70 T_2			Spring '71 T_3			Fall '71 T_4		
	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD
Experiment (#1)	39	4.821	1.295	39	5.769	0.931	72	5.375	1.305	72	5.542	1.266
Experiment (#2)	60	4.500	1.384	60	5.167	1.460	51	4.804	1.342	52	5.154	1.334
Control (C)	65	5.061	1.519	66	5.394	1.288	60	4.817	1.568	60	5.083	1.555
Total	164			165			183			184		

TWO-WAY Anal. of Variance		T_1 & T_2		T_2 & T_3		T_3 & T_4	
		F	Signif.	F	Signif.	F	Signif.
Experiment #1 W/ Control State	Col.	0.128	NS	7.002	.01	8.420	.01
	Row	11.677	.001	7.582	.01	1.531	NS
Experiment #2 W/ Control State	Col.	6.181	.05	0.844	NS	0.022	NS
	Row	6.325	.05	5.154	.05	2.463	NS

Questionnaire Data

Variable # 6 : I am appropriately involved in decisions affecting my work



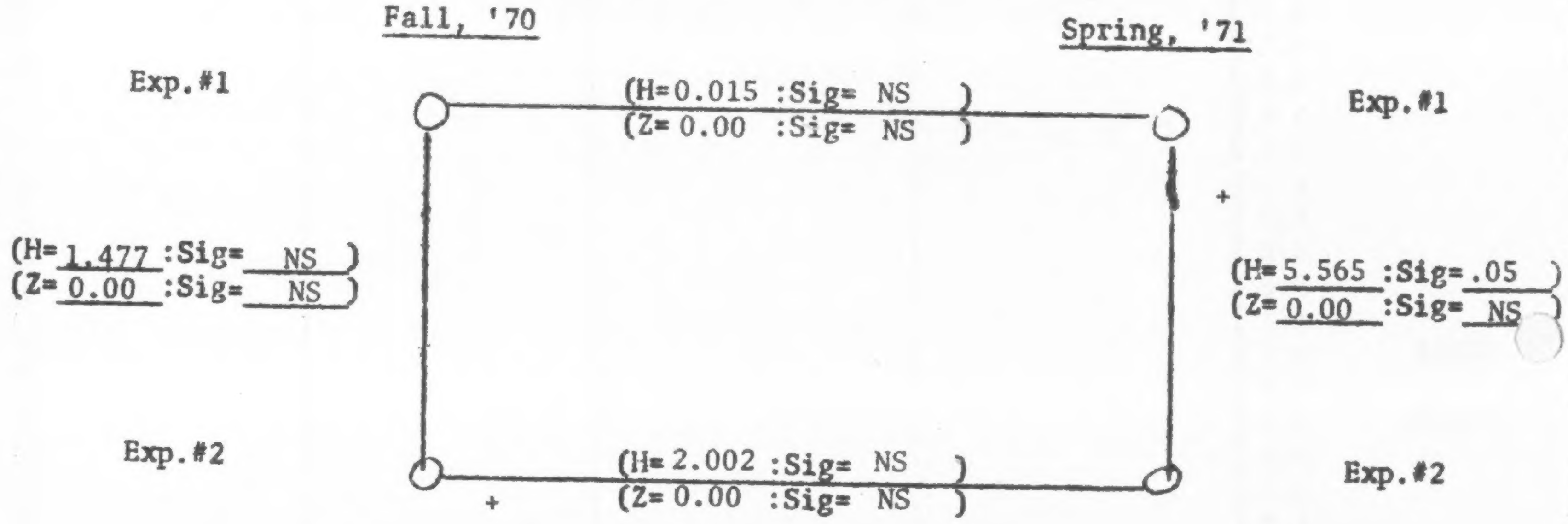
	Fall '69 T_1			Fall '70 T_2			Spring '71 T_3			Fall '71 T_4		
	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD
Experiment (#1)	39	5.103	1.252	39	5.949	0.887	73	5.699	1.298	73	5.795	1.201
Experiment (#2)	60	5.500	1.408	59	5.661	1.385	52	4.808	1.456	53	4.925	1.439
Control (C)	65	5.492	1.437	66	5.879	1.117	61	5.082	1.452	61	5.246	1.479
Total	164			164			186			187		

TWO-WAY Anal. of Variance		T_1 & T_2		T_2 & T_3		T_3 & T_4	
		F	Signif.	F	Signif.	F	Signif.
Experiment #1 W/ Control State	Col.	0.846	NS	4.355	.05	12.327	.001
	Row	12.574	.001	10.125	.01	0.613	NS
Experiment #2 W/ Control State	Col.	0.383	NS	1.959	NS	2.356	NS
	Row	2.604	NS	22.038	.001	0.524	NS

CONTENT ANALYSIS DATA

Variable 12 : Promote Cooperative Team Work

SCHEMATIC PRESENTATIONS OF ANALYSIS

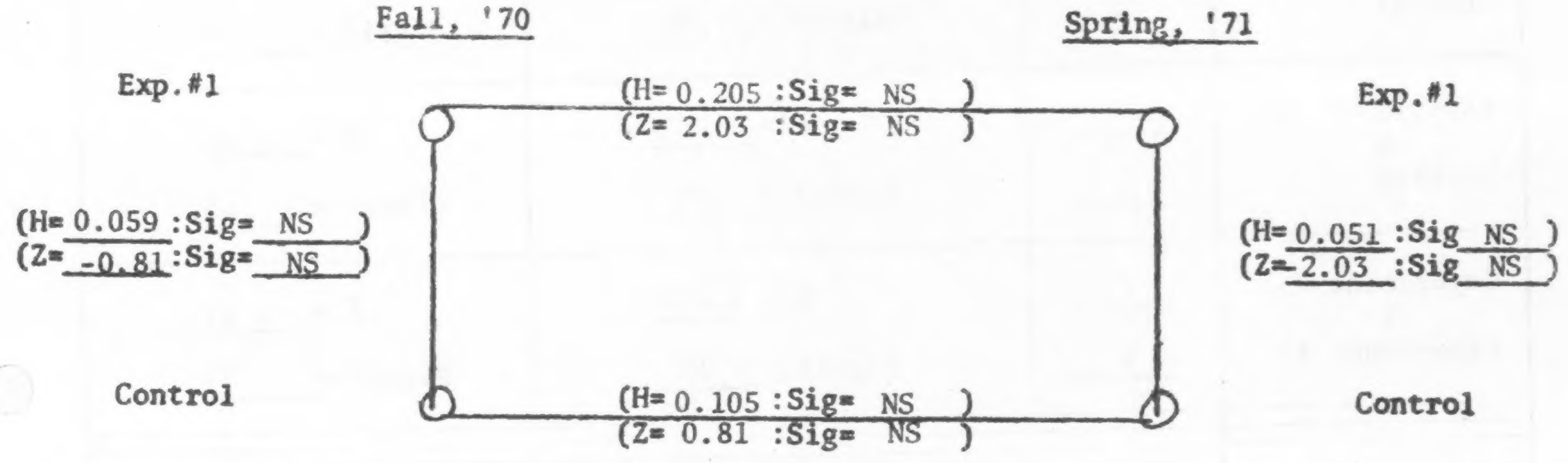

Fall, '70
Spring, '71
Exp.#1
Exp.#1
(H=0.015 :Sig= NS)
(Z= 0.00 :Sig= NS)
(H=1.477 :Sig= NS)
(Z= 0.00 :Sig= NS)
+
(H=5.565 :Sig= .05)
(Z= 0.00 :Sig= NS)
Exp.#2
Exp.#2
(H=2.002 :Sig= NS)
(Z= 0.00 :Sig= NS)
+

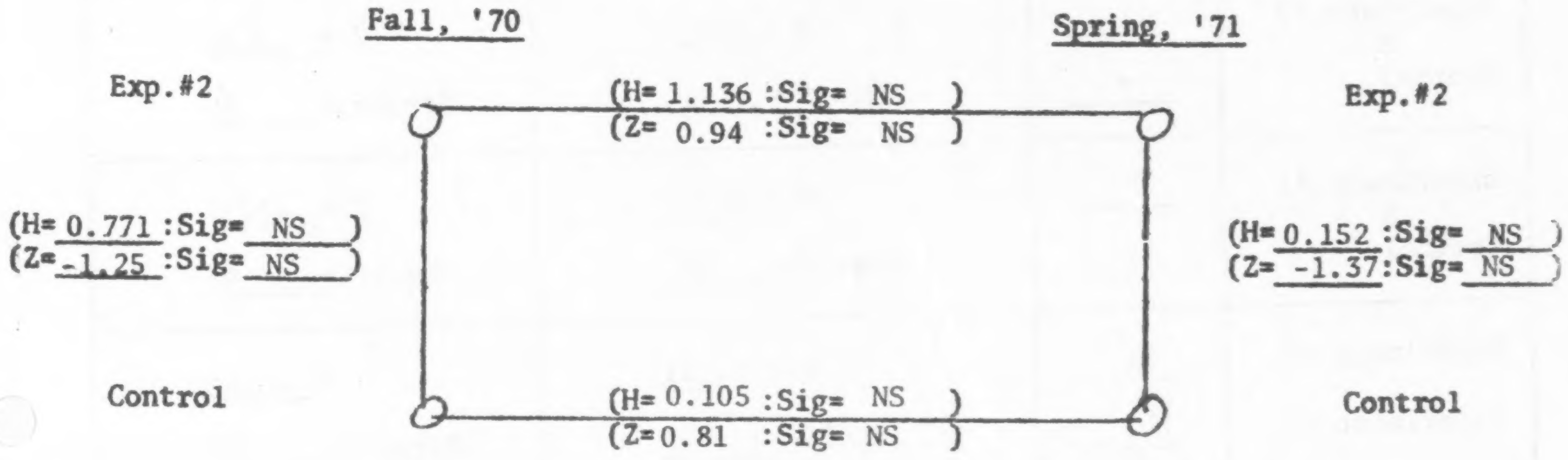
FALL, 1970	Sample Size (N)	Kruskal-Wallis One-Way Analysis of Variance	Binomial Test of Proportions
Experiment #1 & Experiment #2	8 7	H = 1.477 Signif.= NS	Z = 0.00 Signif.=
SPRING, 1971			
Experiment #1 & Experiment #2	11 10	H = 5.565 Signif.= .05	Z = 0.00 Signif.=
FALL, 1970 to SPRING, 1971			
Experiment #1 & Experiment #1	8 11	H = 0.015 Signif.= NS	Z = 0.00 Signif.=
Experiment #2 & Experiment #2	7 10	H = 2.002 Signif.= NS	Z = 0.00 Signif.=

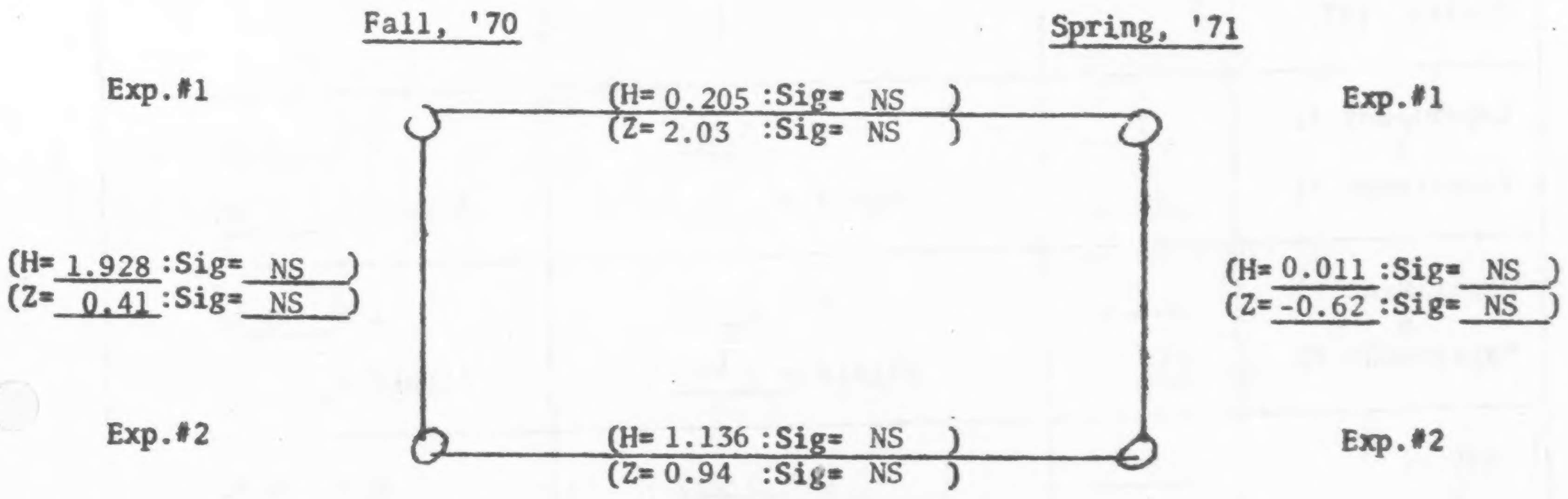
CONTENT ANALYSIS DATA

Variable 42 : Roadblock: Amount of cooperative teamwork present.

SCHEMATIC PRESENTATIONS OF ANALYSIS


Fall, '70
Spring, '71
Exp.#1
(H= 0.205 :Sig= NS)
(Z= 2.03 :Sig= NS)
Exp.#1
(H= 0.059 :Sig= NS)
(Z= -0.81 :Sig= NS)
(H= 0.051 :Sig NS)
(Z=-2.03 :Sig NS)
Control
(H= 0.105 :Sig= NS)
(Z= 0.81 :Sig= NS)
Control


Fall, '70
Spring, '71
Exp.#2
(H= 1.136 :Sig= NS)
(Z= 0.94 :Sig= NS)
Exp.#2
(H= 0.771 :Sig= NS)
(Z= -1.25 :Sig= NS)
(H= 0.152 :Sig= NS)
(Z= -1.37 :Sig= NS)
Control
(H= 0.105 :Sig= NS)
(Z= 0.81 :Sig= NS)
Control


Fall, '70
Spring, '71
Exp.#1
(H= 0.205 :Sig= NS)
(Z= 2.03 :Sig= NS)
Exp.#1
(H= 1.928 :Sig= NS)
(Z= 0.41 :Sig= NS)
(H= 0.011 :Sig= NS)
(Z= -0.62 :Sig= NS)
Exp.#2
(H= 1.136 :Sig= NS)
(Z= 0.94 :Sig= NS)
Exp.#2

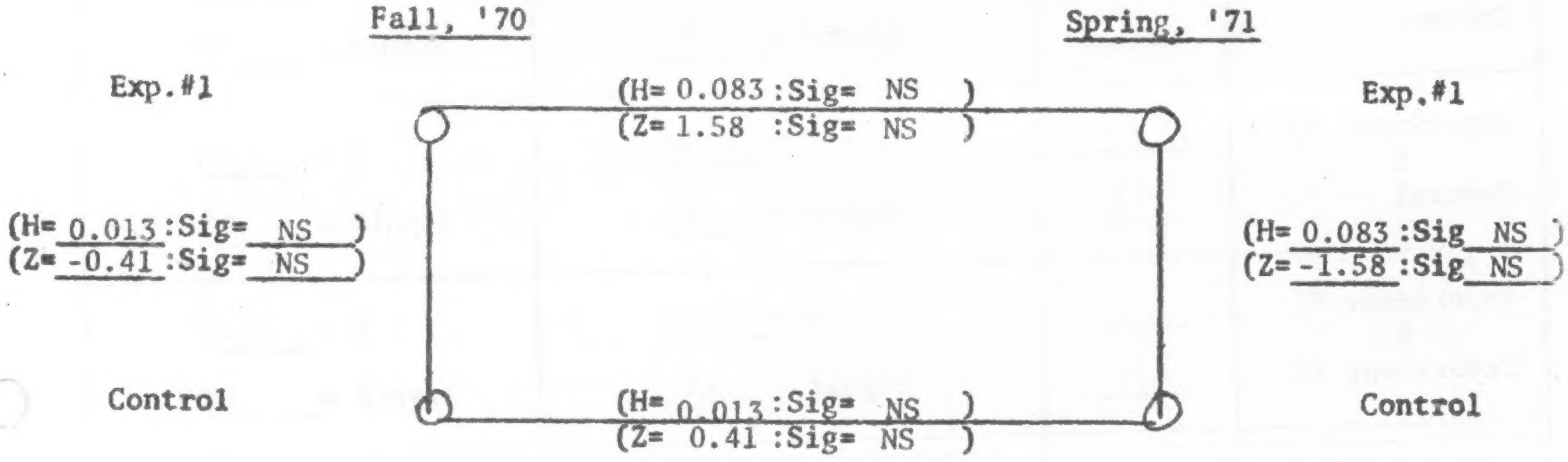
Variable 42 : Roadblock: Amount of cooperative teamwork present.

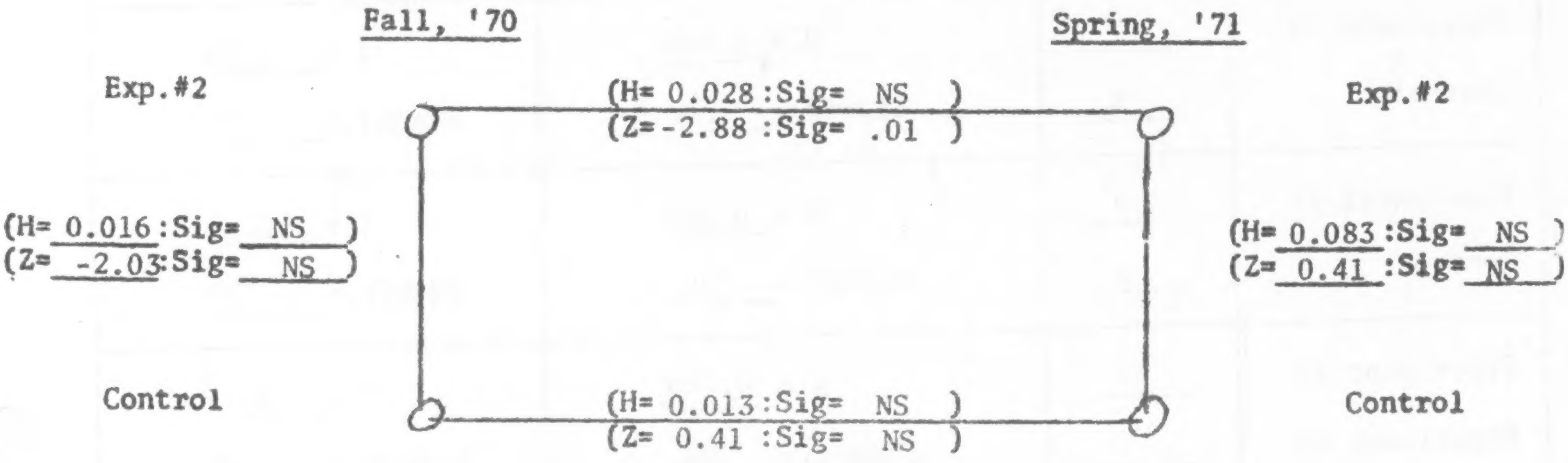
Fall, 1970	Sample Size (N)	Kruskal-Wallis One-Way Analysis of Variance	Binomial Test of Proportions
Experiment #1 & Control	7 5	H = 0.059 Signif.= NS	Z = -0.81 Signif.= NS
Experiment #2 & Control	8 5	H = 0.771 Signif.= NS	Z = -1.25 Signif.= NS
Experiment #1 & Experiment #2	7 8	H = 1.929 Signif.= NS	Z = 0.41 Signif.= NS
Spring, 1971			
Experiment #1 & Control	11 7	H = 0.051 Signif.= NS	Z = -2.03 Signif.= NS
Experiment #2 & Control	10 7	H = 0.153 Signif.= NS	Z = -1.37 Signif.= NS
Experiment #1 & Experiment #2	11 10	H = 0.011 Signif.= NS	Z = -0.62 Signif.= NS
Fall, 1970 to Spring, 1971			
Experiment #1 & Experiment #1	7 11	H = 0.205 Signif.= NS	Z = 2.03 Signif.= NS
Experiment #2 & Experiment #2	8 10	H = 1.137 Signif.= NS	Z = 0.94 Signif.= NS
Control & Control	5 7	H = 0.106 Signif.= NS	Z = 0.81 Signif.= NS

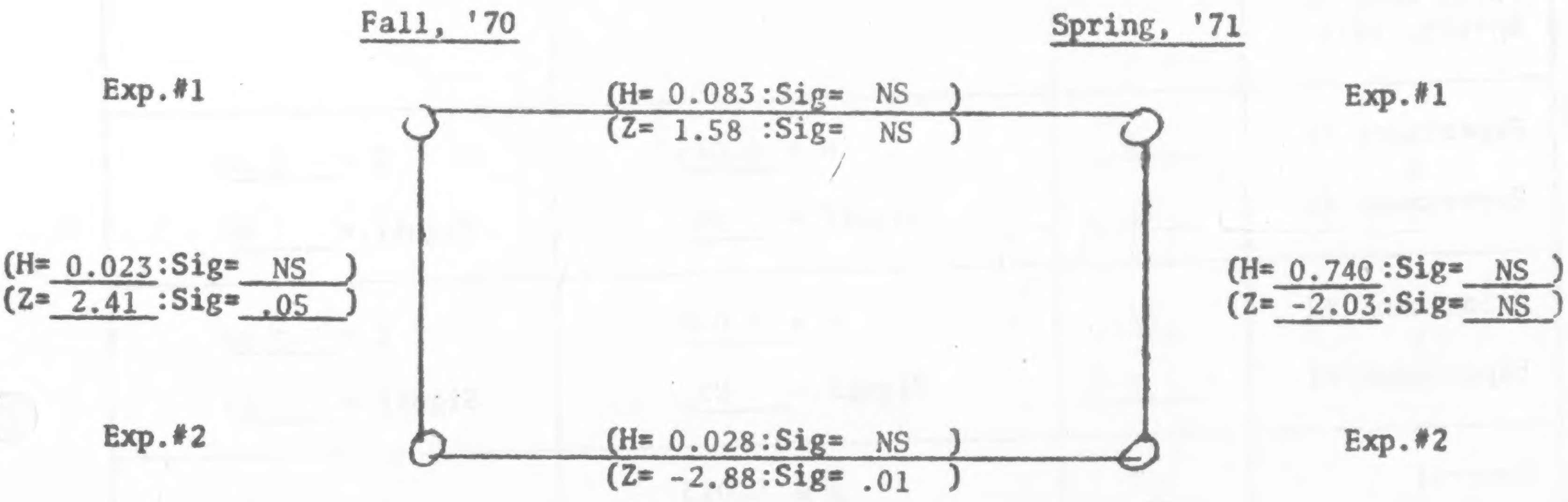
CONTENT ANALYSIS DATA

Variable 44 : Roadblocks: Degree to which persons in organization will support change.

SCHEMATIC PRESENTATIONS OF ANALYSIS


Fall, '70
Spring, '71
Exp.#1
(H= 0.083 :Sig= NS)
(Z= 1.58 :Sig= NS)
Exp.#1
(H= 0.013 :Sig= NS)
(Z= -0.41 :Sig= NS)
(H= 0.083 :Sig NS)
(Z= -1.58 :Sig NS)
Control
(H= 0.013 :Sig= NS)
(Z= 0.41 :Sig= NS)
Control


Fall, '70
Spring, '71
Exp.#2
(H= 0.028 :Sig= NS)
(Z= -2.88 :Sig= .01)
Exp.#2
(H= 0.016 :Sig= NS)
(Z= -2.03 :Sig= NS)
(H= 0.083 :Sig= NS)
(Z= 0.41 :Sig= NS)
Control
(H= 0.013 :Sig= NS)
(Z= 0.41 :Sig= NS)
Control


Fall, '70
Spring, '71
Exp.#1
(H= 0.083 :Sig= NS)
(Z= 1.58 :Sig= NS)
Exp.#1
(H= 0.023 :Sig= NS)
(Z= 2.41 :Sig= .05)
(H= 0.740 :Sig= NS)
(Z= -2.03 :Sig= NS)
Exp.#2
(H= 0.028 :Sig= NS)
(Z= -2.88 :Sig= .01)
Exp.#2

Variable 44 : Roadblocks: Degree to which persons in organization will support change.

Fall, 1970	Sample Size (N)	Kruskal-Wallis One-Way Analysis of Variance	Binomial Test of Proportions
Experiment #1 & Control	8 7	H = 0.013 Signif.= NS	Z = -0.41 Signif.= NS
Experiment #2 & Control	12 7	H = 0.016 Signif.= NS	Z = -2.03 Signif.= NS
Experiment #1 & Experiment #2	8 12	H = 0.024 Signif.= NS	Z = 2.41 Signif.= .05
Spring, 1971			
Experiment #1 & Control	11 8	H = 0.084 Signif.= NS	Z = -1.58 Signif.= NS
Experiment #2 & Control	7 8	H = 0.084 Signif.= NS	Z = 0.41 Signif.= NS
Experiment #1 & Experiment #2	11 7	H = 0.740 Signif.= NS	Z = -2.03 Signif.= NS
Fall, 1970 to Spring, 1971			
Experiment #1 & Experiment #1	8 11	H = 0.084 Signif.= NS	Z = 1.58 Signif.= NS
Experiment #2 & Experiment #2	12 7	H = 0.029 Signif.= NS	Z = -2.88 Signif.= .01
Control & Control	7 8	H = 0.013 Signif.= NS	Z = 0.41 Signif.= NS

CONTENT ANALYSIS DATA

Variable 36 : Roadblocks: Organization Reacts to Problems Rather Than Anticipates and Deals with Problems.

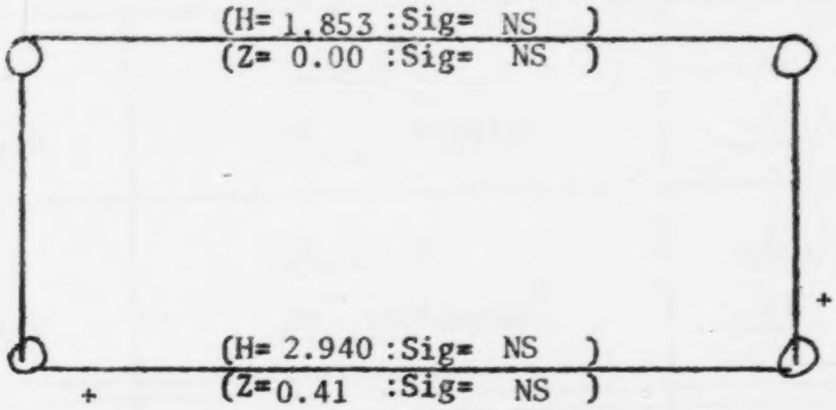
SCHEMATIC PRESENTATIONS OF ANALYSIS

Fall, '70 — Spring, '71

Exp.#1

(H= 1.853 :Sig= NS)
(Z= 0.00 :Sig= NS)

Exp.#1



(H= 0.182 :Sig= NS)
(Z= 0.83 :Sig= NS)

(H= 6.075 :Sig .05)
(Z= -0.40 :Sig NS)

Control

(H= 2.940 :Sig= NS)
(Z= 0.41 :Sig= NS)

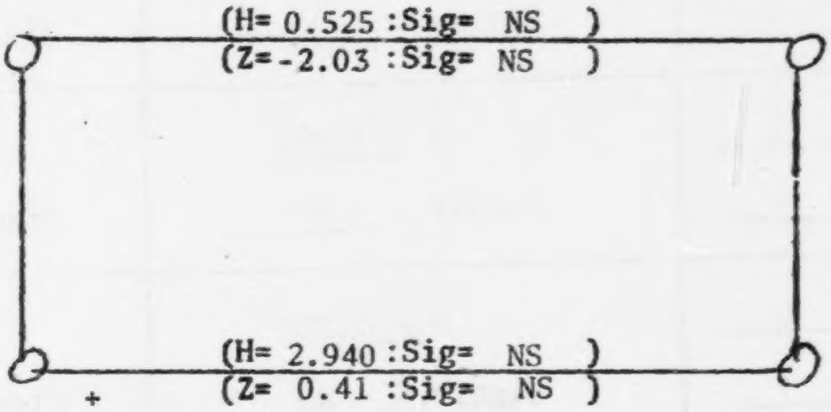
Control

Fall, '70 — Spring, '71

Exp.#2

(H= 0.525 :Sig= NS)
(Z= -2.03 :Sig= NS)

Exp.#2



(H= 1.538 :Sig= NS)
(Z= -3.69 :Sig= .01)

(H= 1.906 :Sig= NS)
(Z= -0.81 :Sig= NS)

Control

(H= 2.940 :Sig= NS)
(Z= 0.41 :Sig= NS)

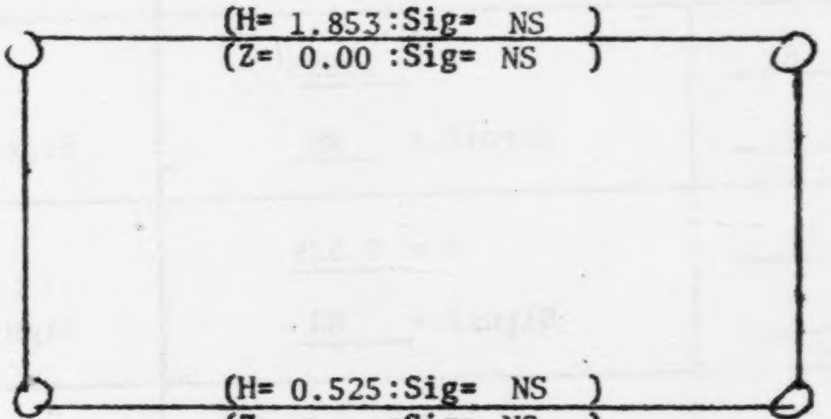
Control

Fall, '70 — Spring, '71

Exp.#1

(H= 1.853 :Sig= NS)
(Z= 0.00 :Sig= NS)

Exp.#1



(H= 0.495 :Sig= NS)
(Z= 2.54 :Sig= .05)

(H= 2.250 :Sig= NS)
(Z= 0.40 :Sig= NS)

Exp.#2

(H= 0.525 :Sig= NS)
(Z= -2.03 :Sig= NS)

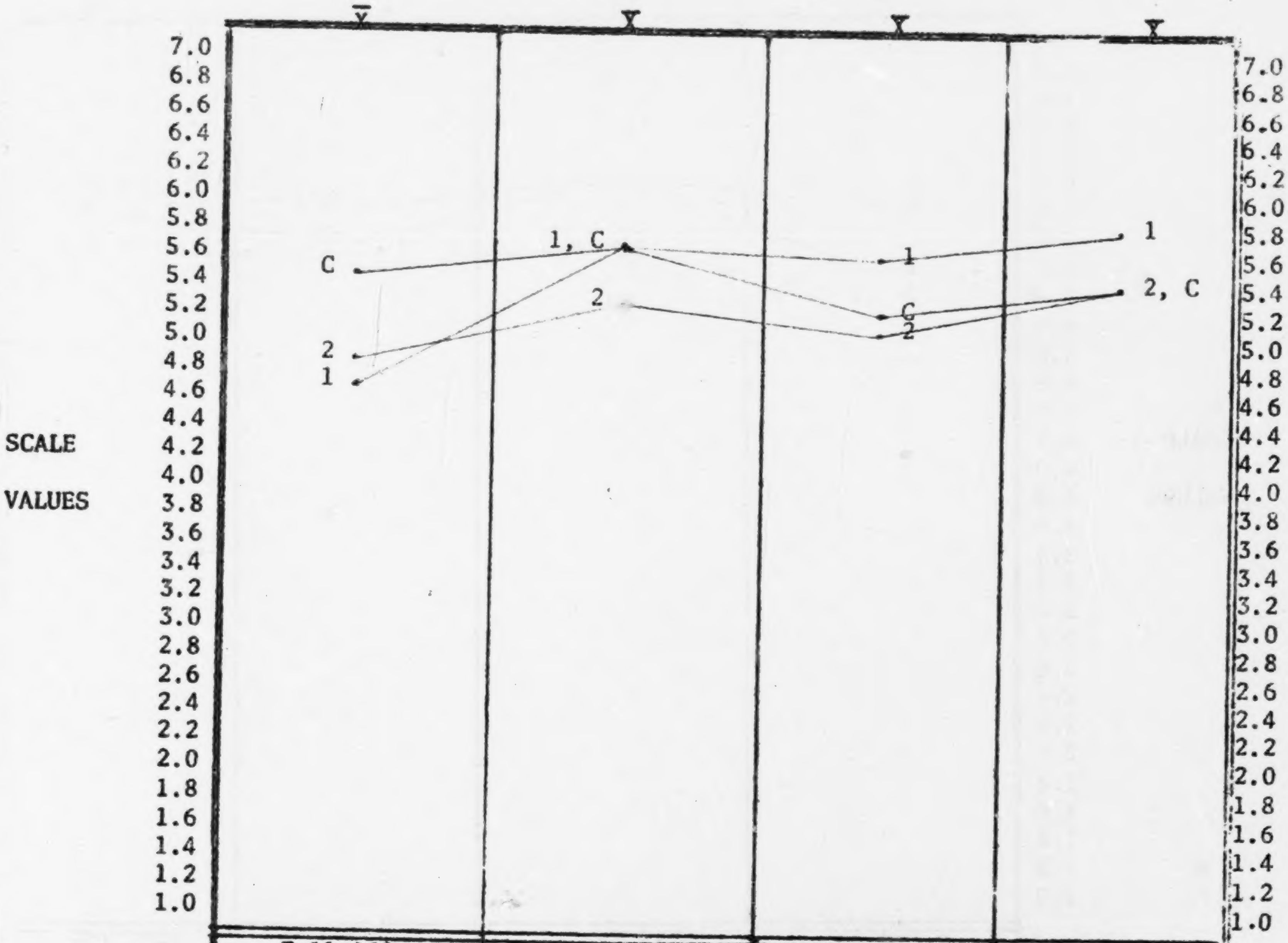
Exp.#2

Variable 36 : Roadblocks: Organization Reacts to Problems Rather Than Anticipates and Deals with Problems.

Fall, 1970	Sample Size (N)	Kruskal-Wallis One-Way Analysis of Variance	Binomial Test of Proportions
Experiment #1 & Control	6 4	H = 0.182 Signif.= NS	Z = 0.83 Signif.= NS
Experiment #2 & Control	11 4	H = 1.538 Signif.= NS	Z = -3.69 Signif.= .01
Experiment #1 & Experiment #2	6 11	H = 0.495 Signif.= NS	Z = 2.54 Signif.= .05
Spring, 1971			
Experiment #1 & Control	6 5	H = 6.075 Signif.= .05	Z = -0.40 Signif.= NS
Experiment #2 & Control	7 5	H = 1.906 Signif.= NS	Z = -0.81 Signif.= NS
Experiment #1 & Experiment #2	6 7	H = 2.250 Signif.= NS	Z = 0.40 Signif.= NS
Fall, 1970 to Spring, 1971			
Experiment #1 & Experiment #1	6 6	H = 1.853 Signif.= NS	Z = 0.00 Signif.= NS
Experiment #2 & Experiment #2	11 7	H = 0.525 Signif.= NS	Z = -2.03 Signif.= NS
Control & Control	4 5	H = 2.940 Signif.= NS	Z = 0.41 Signif.= NS

Questionnaire Data

Variable # 26 : My work group understands what we are trying to achieve

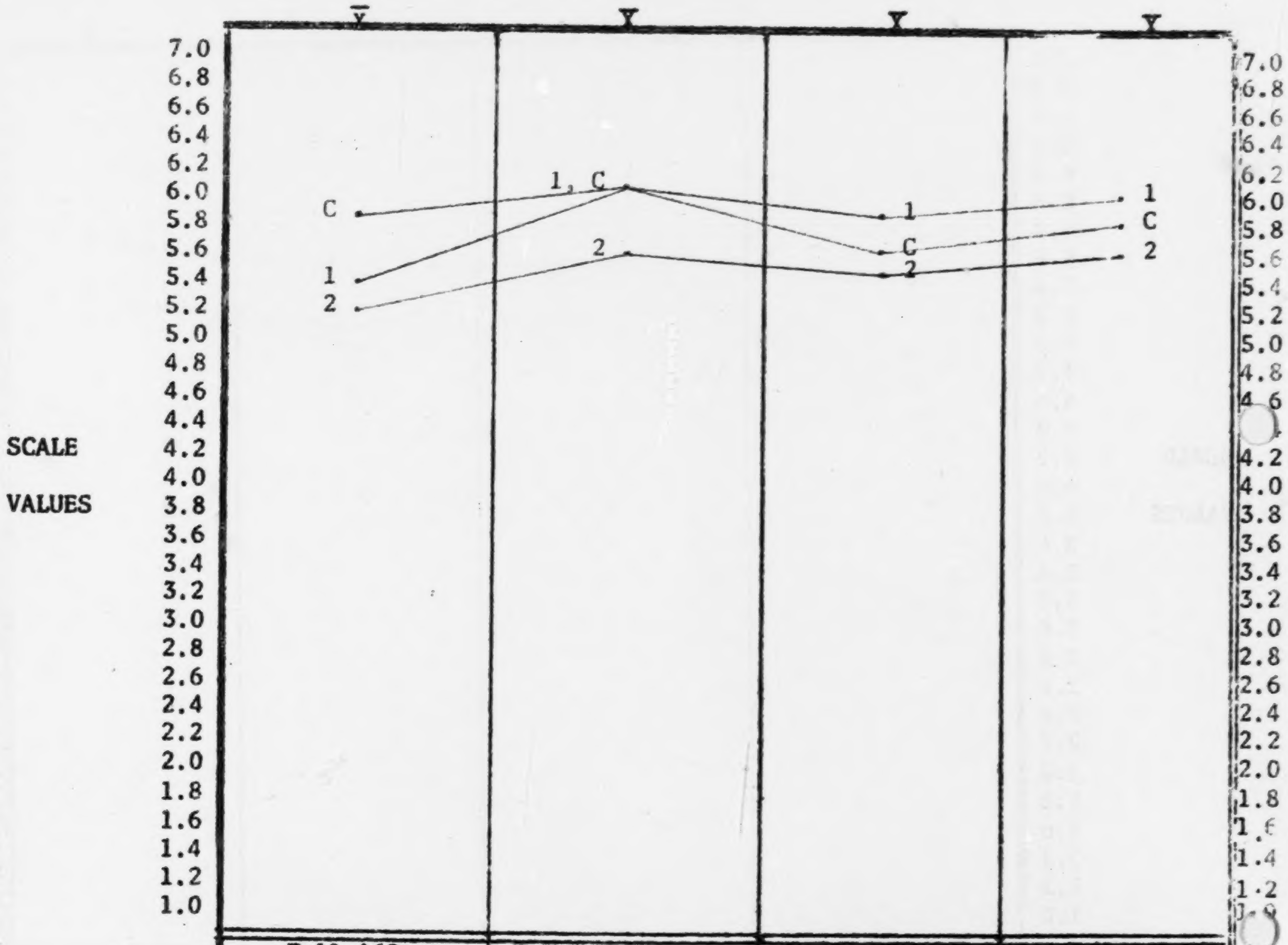


	Fall '69 T_1			Fall '70 T_2			Spring '71 T_3			Fall '71 T_4		
	N	X̄	SD	N	X̄	SD	N	X̄	SD	N	X̄	SD
Experiment (#1)	39	4.718	1.450	39	5.667	0.898	73	5.562	0.928	73	5.849	0.861
Experiment (#2)	60	4.867	1.171	60	5.317	1.172	49	5.143	1.208	50	5.420	1.213
Control (C)	65	5.477	1.359	66	5.727	1.075	61	5.164	1.306	61	5.426	1.271
Total	164			165			183			184		

TWO-WAY Anal. of Variance		T_1 & T_2		T_2 & T_3		T_3 & T_4	
		F	Signif.	F	Signif.	F	Signif.
Experiment #1 W/ Control State	Col.	5.539	.05	1.395	NS	9.394	.01
	Row	11.855	.01	5.483	.05	4.217	.05
xperiment #2 W/ Control State	Col.	11.346	.001	1.9183	NS	0.006	NS
	Row	5.340	.05	5.594	.05	2.527	NS

Questionnaire Data

Variable # 12 : My group works hard to achieve its goals



	Fall '69 T_1			Fall '70 T_2			Spring '71 T_3			Fall '71 T_4		
	N	X̄	SD	N	X̄	SD	N	X̄	SD	N	X̄	SD
Experiment (#1)	39	5.410	1.044	39	6.128	0.656	73	5.932	0.855	73	6.027	0.897
Experiment (#2)	60	5.167	1.404	60	5.634	1.149	52	5.538	1.019	53	5.642	1.002
Control (C)	65	5.877	1.281	66	6.091	0.956	60	5.600	1.417	60	5.800	1.246
Total	164			165			185			186		

TWO-WAY Anal. of Variance		T_1 & T_2		T_2 & T_3		T_3 & T_4	
		F	Signif.	F	Signif.	F	Signif.
Experiment #1 W/ Control State	Col.	2.078	NS	1.812	NS	4.203	.05
	Row	9.790	.01	6.298	.05	1.178	NS
Experiment #2 W/ Control State	Col.	14.702	.001	3.016	NS	0.475	NS
	Row	4.994	.05	3.841	.05	0.902	NS

QUESTIONNAIRE

Appendix B

General Information

Objectives of the Research

This questionnaire is part of a study to evaluate the impact of applying particular learning methods and modified contents of the American Management Association's management development program to various levels of state educational Administrators.

Why the Research is being done

My goal and reason for asking you to fill out this questionnaire is to attempt to document various types of possible impacts that the AMA's training might have. I am personally involved for additional reasons. The evaluation report that will be written from my research will serve as the basis for fulfilling the final requirements for a Ph.D. in Public Administration at Syracuse University.

Filling out the Questionnaire

This questionnaire has been developed to provide information about how personnel of the Department of Education view their organization and some of the relationships in it. Please be frank in your answers; your openness is essential. Please do not feel you are being tested against any arbitrary standards of right or wrong. It is most important that you answer all of the questions.

Your anonymity will be insured. No one other than myself will be allowed to see the completed questionnaire. A special coding system insures that the information you provide will be completely anonymous.

Definitions

We	Members of your work group
Our manager	The Commissioner, Supt., Dept. head, etc., who has greatest day-to-day influence on your work group
Work group	The smallest organizational unit (group section, department, etc.) in which you work

Directions

1. Read each statement carefully.
2. Then decide to what extent the statement accurately describes your work situation as it was last fall (September-December). Choose a number value on the scale which best shows how you felt then; write your choice on the left side of the page.
3. Next decide to what extent this same statement accurately describes your work situation as it is now. Choose the number on the scale which best shows how you feel this day and mark it on the right side of the page.
4. Be sure to indicate your feeling on all the statements in both the past and present tense.

EXAMPLE

1 2 3 4 5 6 7

not at all — fairly often — very often

Last Fall — Now

3 1. Our organizational plan is well formulated. (44) 5

* *

LAST FALL — NOW

_______ 1. I feel my group works together well. (44)_______

_______ 2. I believe my organization gives me adequate training to do my work effectively. (45)_______

_______ 3. My manager listens when one of us wants to talk about our work. (46)_______

1 2 3 4 5 6 7

not at all fairly often very often

LAST FALL NOW

_______ 4. The goals of this organization are articulated. (47)_______

_______ 5. Our goals are realistic and attainable with our best efforts. (48)_______

_______ 6. I am appropriately involved in decisions affecting my work. (49)_______

_______ 7. People in my group have the technical knowledge to do the job. (Cd.2)(1)_______

_______ 8. Feedback on my performance is given constructively by my boss. (2)_______

_______ 9. My manager knows and understands the problems I face. (3)_______

_______ 10. I am treated fairly. (4)_______

_______ 11. Based on information I have received from my boss, I know if I am measuring up in my job. (5)_______

_______ 12. My group works hard to achieve its goals. (6)_______

_______ 13. When differences arise in my work group, we have good ways for settling them ourselves. (7)_______

_______ 14. My manager encourages and supports innovation. (8)_______

_______ 15. The work I do makes good use of my abilities. (9)_______

_______ 16. People here are open and honest in talking with each other. (10)_______

_______ 17. My work is important to the future and quality of education in my state. (11)_______

_______ 18. I feel my accomplishments are recognized (12)_______

_______ 19. I feel the accomplishments of the State Education Department are recognized. (13)_______

1 2 3 4 5 6 7

not at all fairly often very often

LAST FALL NOW

_______ 20. Good ways are used to let me know how I can improve my performance. (14)_______

_______ 21. My manager shows confidence and trust in me. (15)_______

_______ 22. I have good ways for knowing how good our results are. (16)_______

_______ 23. The people I work with participate appropriately in setting the goals of our work. (17)_______

_______ 24. The ideas and opinions that my work group generates are heard and acted on by my superior. (18)_______

_______ 25. My manager tries hard to improve the work situation. (19)_______

_______ 26. My work group understands what we are trying to achieve. (20)_______

_______ 27. There is opportunity in my Department for people to grow and develop themselves. (21)_______

_______ 28. My manager recognizes when a problem is developing and does something constructive about it. (22)_______

_______ 29. The kinds of things I am doing will make a long term contribution to education. (23)_______

_______ 30. My manager makes it clear that he is committed to the success of our projects. (24)_______

_______ 31. I am given appropriate opportunities to gain more technical knowledge about my job. (25)_______

_______ 32. My manager is good about bringing our problems to his boss's attention. (26)_______

_______ 33. Higher management's reactions to the problems which reach them are fair. (27)_______

_______ 34. I and my manager work well together. (28)_______

1 2 3 4 5 6 7

not at all fairly often very often

LAST FALL NOW

_______ 35. I really feel my immediate work group is getting things done. (29)_______

_______ 36. My manager handles disagreement and conflict well. (30)_______

_______ 37. Morale in my work group is high. (31)_______

_______ 38. The climate in my group is such that I want to contribute as much as I can. (32)_______

_______ 39. As I see it, planning is an integral part of running the state's schools. (33)_______

_______ 40. My organization's overall plan is operable. (34)_______

_______ 41. My organization's policy statements are clear. (35)_______

_______ 42. My organization's performance standards are understood. (36)_______

_______ 43. My boss has expressed belief that the American Management Association's training program will be helpful. (37)_______

CONTENT ANALYSIS

CODING SHEETS

Appendix C

Question #1

What do you feel you will (obtain) (obtained) from the AMA training:
pre-training post-training

Intensity Scale

0 uncodeable (no answer)
1 no value
2
little value
3
included as circumstances permit
5
significant should be stressed
6
7 maximum commitment

Domains	Column Number	Score
* 1. definition of the institution's mission	1	______
* 2. modify previously established objectives	2	______
* 3. identify and analyze alternative courses of action	3	______
* 4. determine priorities	4	______
* 5. define standards of performance for key administrators	5	______
* 6. specify task completion dates and action assignments	6	______
* 7. assign responsibilities to subordinate units	7	______
* 8. design a methodology by which future performance may be evaluated in relation to the performances specified in the plan	8	______
* 9. produce and implement a long-range strategic plan	9	______
*10. establish credibility of planning	10	______
11. promote free flow of information throughout SED	11	______
*12. promote cooperative team work	12	______

* = Item used in Data Analysis

Question #2

What is the attitude of your boss toward the AMA training?

Domain	Intensity Scale	Column Number	Score
*13. Question acts as domain in this case	0 uncodeable (no answer)	13	______
	1 no value		
	2		
	little value		
	3		
	included as circumstances permit		
	4		
	5		
	significant, should be stressed		
	6		
	7 maximum commitment		

Question #3

What do you see as the most important aspects of your job?

Domains	Intensity Scale	Column Number	Score
14. leadership	0 uncodeable (no answer)	14	______
15. impact upon quality of instructor	1 no value	15	______
16. communication with outside constituencies	2	16	______
17. effect communication within the organization	little value 3	17	______
18. executes decisions of superiors	4 included as circumstances permit	18	______
19. makes plans	5	19	______
20. implementation and cooperation between units	significant, should be stressed 6	20	______
21. initiate change	7 maximum value	21	______
22. utilization of organizational talent (productivity)		22	______
23. provide human and monetary rescources for organization		23	______

Question #4

What is the function of your division or department?

Domains	Column Number	Score
24. promote quality of instruction	24	_____
25. communicate with outside constituencies	25	_____
26. execute decisions of superior agencies of government	26	_____
27. regulate LEA's	27	_____
28. make plans	28	_____
29. implement plans	29	_____
30. generator of information and data base	30	_____
31. execute educational statutes	31	_____
32. initiate change	32	_____
33. utilization of organizational talent	33	_____

Intensity Scale

0 uncodeable (no answer)
1 no value
2
little value
3
4 only emphasized as circumstances permit
5
significant
6
7 maximum importance

Question #5

How are major decisions made in this organization?

Domains

Question acts as domain in this case

			Intensity Scales		Column Number Scale
*34.		[A] Involvement		[B] Quality	34 ____
*35.	0	uncodeable (no response)	0	uncodeable (no response)	35 ____
	1	no participation/no discussion invited. Decision-making only at top.	1	never effective	
	2	no participation/some discussion invited. Decision-making at top.	2	seldom effective	
	3		3		
	4	some participation as circumstances permit. Decision-making mostly at top.	4	sometimes effective	
	5	significant participation/ broad policy at top	5		
	6		6	usually effective	
	7	maximum participation throughout SED	7	highly effective	

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Question #6

What are the roadblocks to change in this organization?

Domains	Column Number	Score
*36. organization reacts to problems rather than anticipates and deals with problems	36	______
37. public relations (role of pressure groups)	37	______
38. adequate resources (money and information)	38	______
39. control system expressed through decision-making process	39	______
*40. sense of SED mission	40	______
*41. employee interpersonal skills	41	______
*42. amount of cooperative teamwork present	42	______
43. informal power groupings supporting or opposing goals of formal organization	43	______
*44. degree to which persons within organization will support change	44	______

Intensity Scale

0 uncodeable (no answer)
1 major roadblock/always stops change
2 significant roadblock/usually stops change
3
4 occasional roadblock
5
6
7 weak roadblock/seldom stops desired change

Question #7

What resources are not being used?

Domain	Intensity Scale	Column Number	Score
45. expertise within department	0 uncodeable (no response)	45	____
46. coordination of funds	1 no increase	46	____
47. involvement of staff	2 slight increase	47	____
48. use of outside consultants	3	48	____
49. client participation in formulation of educational policy	4 increase as circumstances permit	49	____
50. degree of coordination of information within department	5	50	____
	6 significant increase		
	7 maximum increase		

Question #8

Column
Number Score

How do you feel about the direction your organization is moving?

Domain	Intensity Scale	Column Number	Score
*51. Question acts as domain in this case	0 uncodeable (no answer)	51	______
	1		
	not satisfied at all		
	2		
	3 slightly satisfied		
	4		
	mostly satisfied		
	5		
	6 completely satisfied		
	7		

Question #9

What is the role of planning in the State's school system?

Domain				Column Number Score
(Question acts as domain)	*52. [A] Role of Planning	*53. [B] Need for Planning	*54.[C] Emergence of Planning	
	0 uncodeable (no answer)	0 uncodeable (no answer)	0 uncodeable (no answer)	A) ____
	1 no value	1 no value--should not be used at all	1	B) ____
	2	2	2 still not used	C) ____
	little value	little value--should be used less		
	3		3	
	4 used as circumstances permit	3	4	
			recent development	
	5		5	
	significant	4 used about as much as it should be		
	6	5	6 long-standing practice	
	7 integral part	significant--should be used more	7	
		6		
		7 everything should thoroughly planned		

Question #10

How does planning occur in the organization?

Domain	Intensity Scale	Column Number	Score
55. State Board	0 uncodeable (no response)	55	______
56. Superintendent	1 no influence	56	______
57. Executive Staff	2	57	______
58. other division directors (dept. or area)	slightly influential 3	58	______
59. Planning Unit	4 sometimes influential	59	______
60. persons within SED who have informally assumed some responsibility for planning	5 significant influence 6	60	______
61. all professional people within SED		61	______
62. external consultants	7 maximum influence	62	______
63. pressure groups		63	______

Question #11

How do you communicate your plans?

Domain	Intensity Scale	Column Number	Score
64. Question acts as domain in this case.	0 uncodeable (no answer)	64	____
	1 to self only		
	2		
	immediate staff		
	3		
	4 planning unit		
	5		
	State Education Department		
	6		
	7 made public		

Question #12

What is your role in your organization?

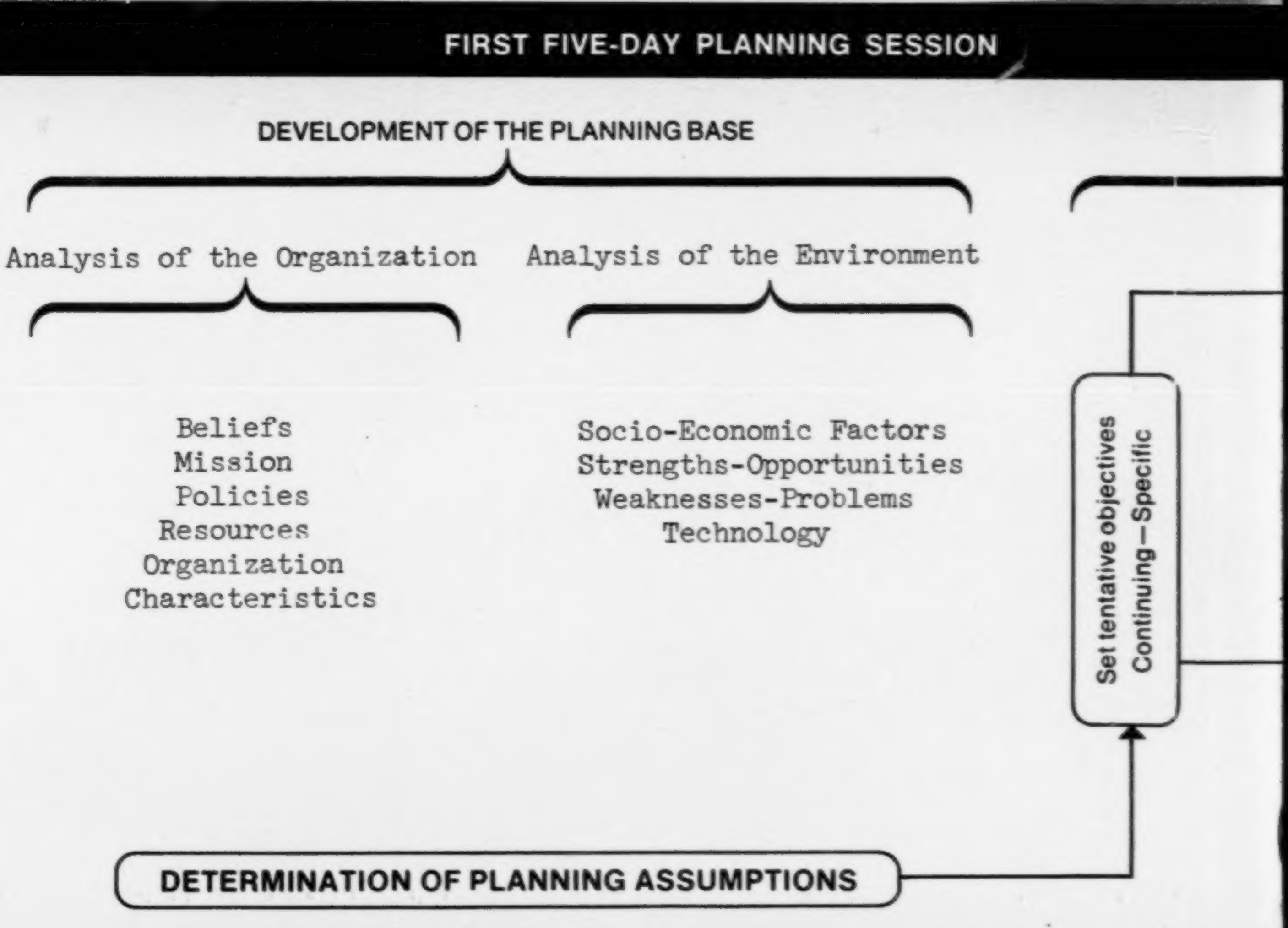
Domains	Intensity Scales	Column Number	Score
65. leadership	0 uncodeable (no anwer)	65	______
66. impact upon quality of instruction	1 slight commitment	66	______
67. communication with outside constituencies	2	67	______
68. effect communication and cooperation within organization	3	68	______
69. makes plans	4 moderate commitment	69	______
70. implements plans (executes decisions	5	70	______
71. initiate change	6	71	______
72. utilization of organizational talent	7 maximum commitment	72	______
73. maximize employee productivity		73	______
74. provide human and monetary resources for the organization		74	______

Question #13

Do you enjoy your role?

Domain	Intensity Scales	Column Number	Score
75. Question acts as domain in this case	0 not codeable (no answer)	75	______
	1 never		
	2		
	seldom		
	3		
	4		
	sometimes		
	5		
	6 usually		
	7 almost always		

MAJOR STEPS IN A MANAGEMENT TEAM'S PLANNING AT THE AMA CENTER FOR PLANNING AND DEVELOPMENT


FIRST FIVE-DAY PLANNING SESSION
DEVELOPMENT OF THE PLANNING BASE
Analysis of the Organization
Analysis of the Environment
Beliefs
Mission
Policies
Resources
Organization
Characteristics
Socio-Economic Factors
Strengths-Opportunities
Weaknesses-Problems
Technology
Set tentative objectives
Continuing—Specific
DETERMINATION OF PLANNING ASSUMPTIONS

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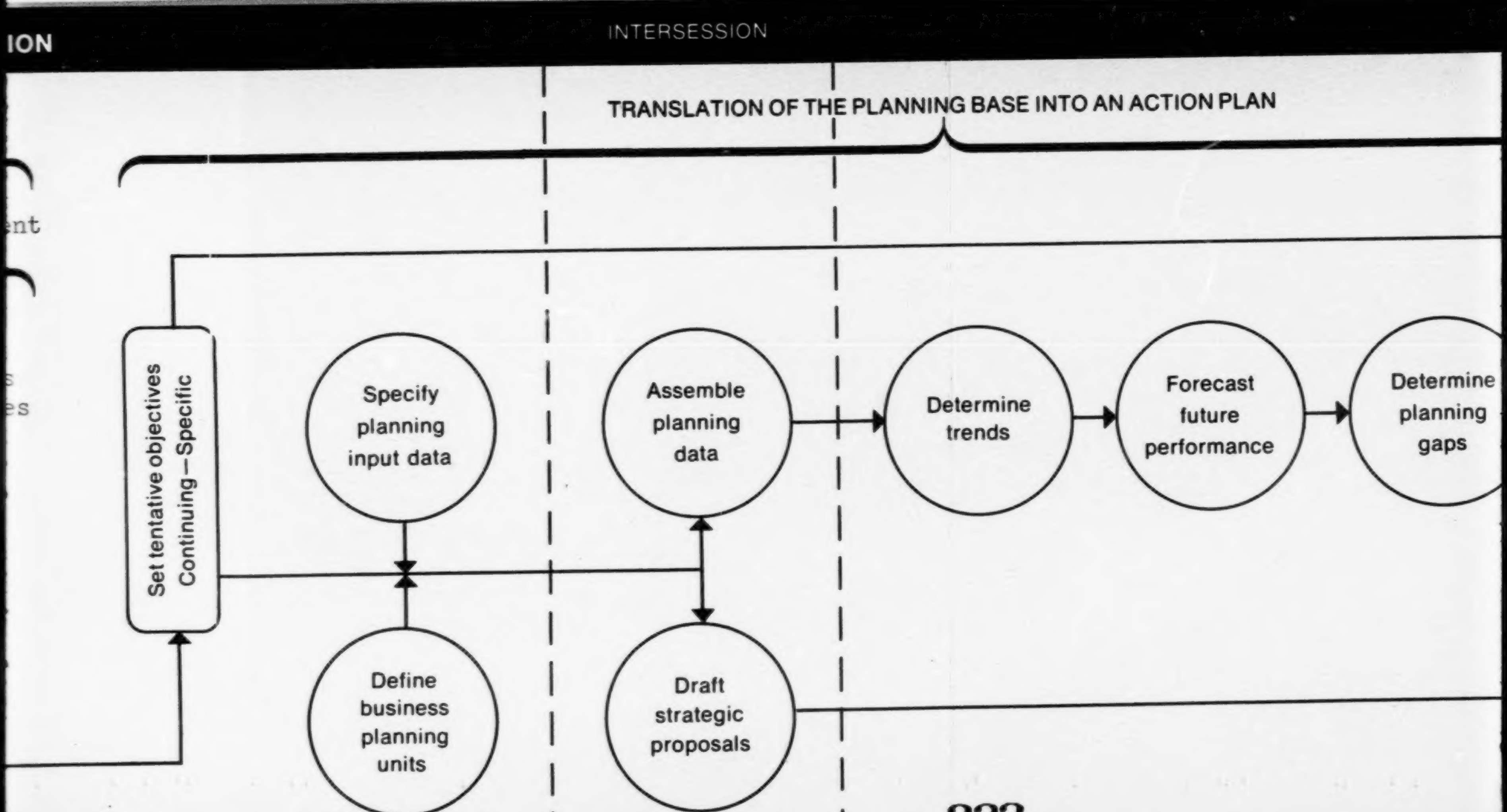
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INTERSESSION
TRANSLATION OF THE PLANNING BASE INTO AN ACTION PLAN
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es
Set tentative objectives Continuing—Specific
Specify planning input data
Define business planning units
Assemble planning data
Draft strategic proposals
Determine trends
Forecast future performance
Determine planning gaps

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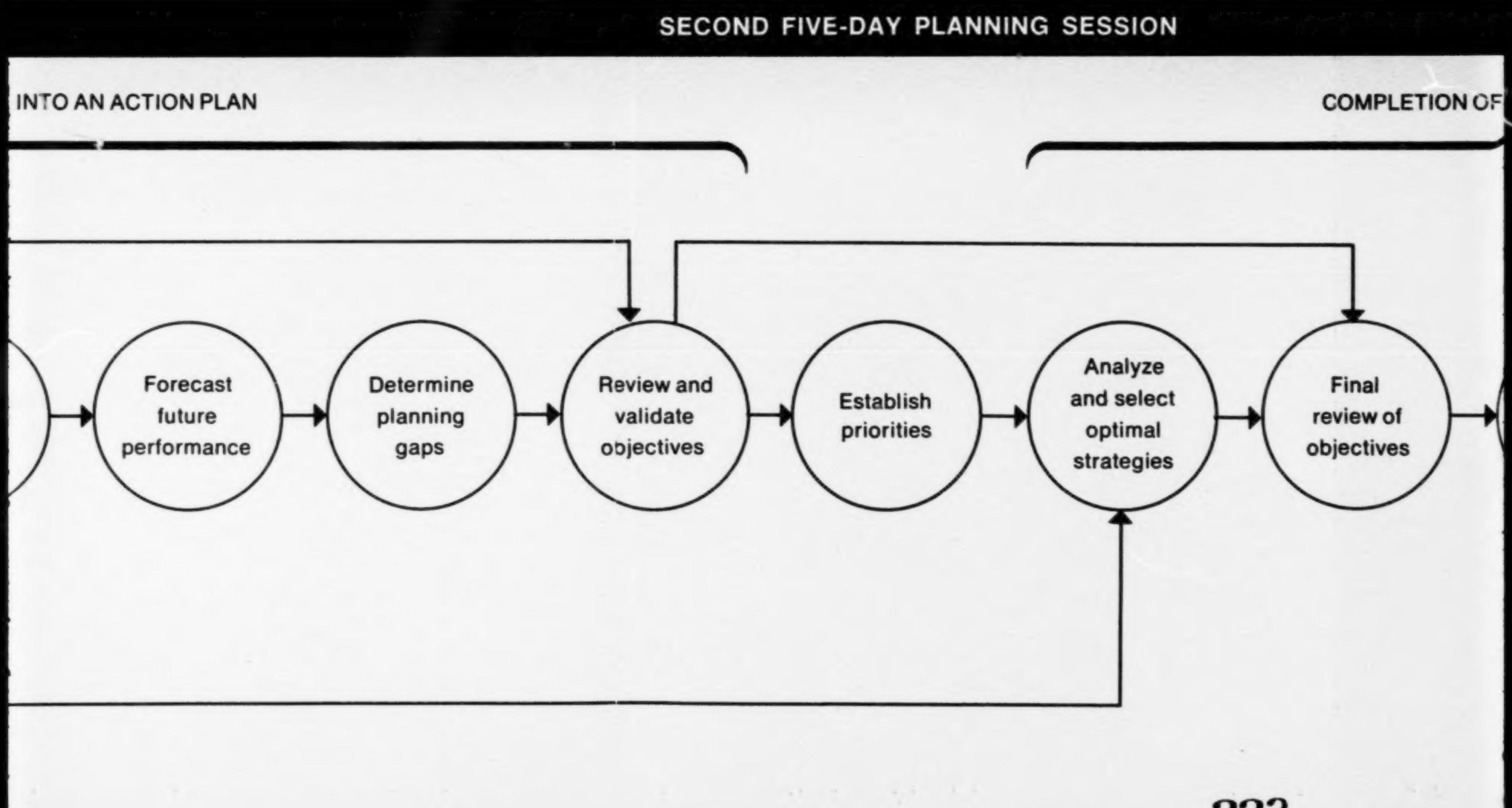
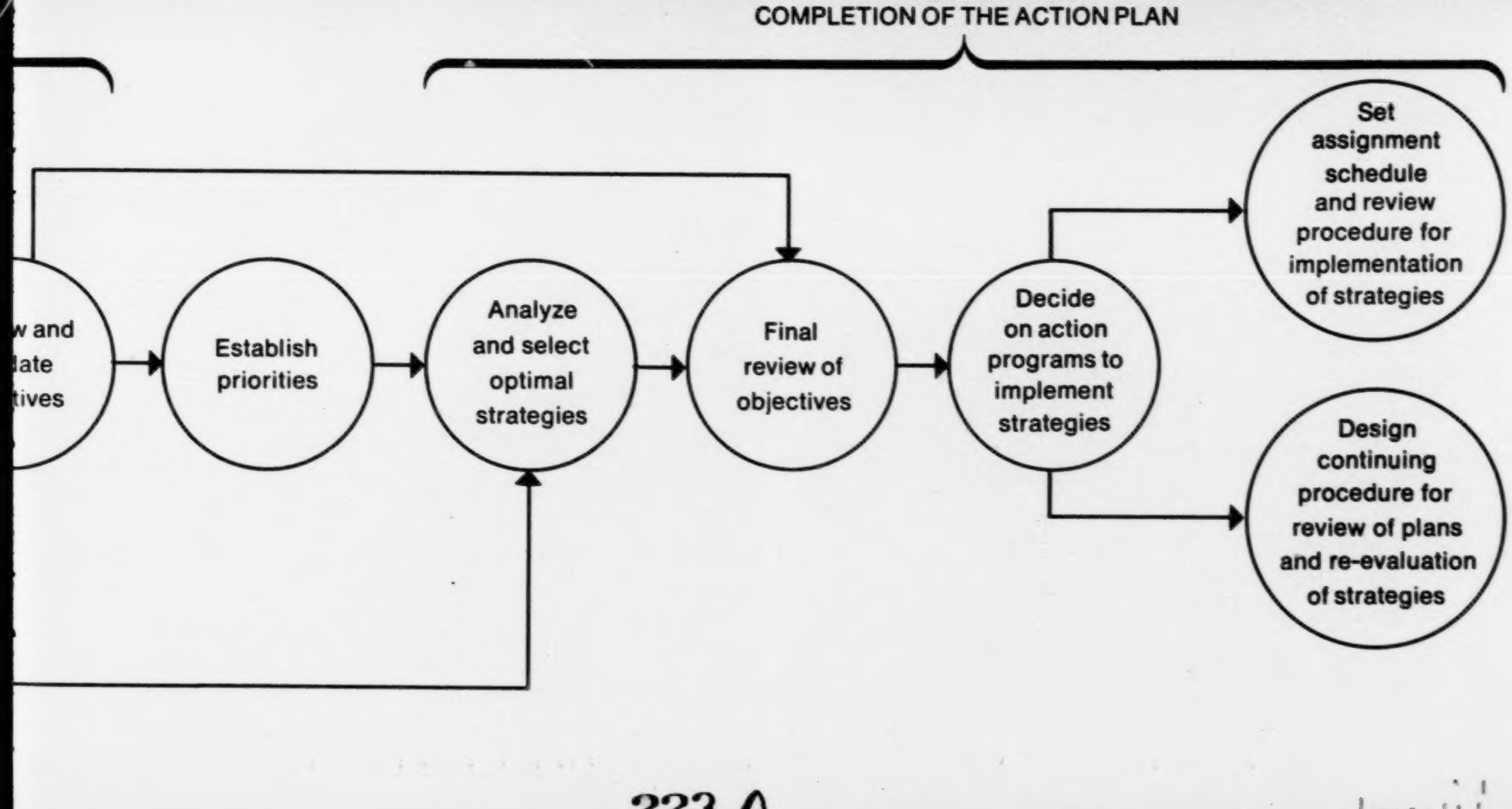

SECOND FIVE-DAY PLANNING SESSION
INTO AN ACTION PLAN
COMPLETION OF
Forecast future performance
Determine planning gaps
Review and validate objectives
Establish priorities
Analyze and select optimal strategies
Final review of objectives

SECOND FIVE-DAY PLANNING SESSION


COMPLETION OF THE ACTION PLAN
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tives
Establish priorities
Analyze and select optimal strategies
Final review of objectives
Decide on action programs to implement strategies
Set assignment schedule and review procedure for implementation of strategies
Design continuing procedure for review of plans and re-evaluation of strategies

THE TEAM PLANNING PROCESS

Essentially, the team process consists of:

- Detaching the chief school officer and his top managers from their daily jobs to enable them to concentrate on developing their planning skills
- Placing the team in an environment conducive to an intensive study and solution of organization's planning problems
- Providing skilled guidance and controlled direction throughout the planning process so that top management acquires the skills to produce and implement a workable long-range educational plan

THE FIRST STEP IN THE PROCESS

Following the decision to participate in the Center's Team Planning Process, a meeting is arranged with the Team Director. At this meeting, the chief school officer and the Director agree on the make-up of the executive team which will be involved in the planning process. The Director outlines the content and purposes of the planning process, reviews the organization's previous experience in planning, obtains existing plans, if available, and requests pertinent background information on the organization. The Director and the CSO may also agree upon some preliminary work assignments to facilitate progress during the first week's meetings.

FIRST FIVE-DAY SESSION

The objectives of this week are to:

- Agree upon a definition of the nature of the organization, the policies which guide its future development, its organization and manpower resources, and its fundamental characteristics

-Analyze existing resources and identify strong areas that can be exploited - and weak areas that should be strengthened.

-Establish tentative objectives for the long-term continuing development of the organization and specific targets to be reached during the planning period

-Determine what kinds of additional information will be needed about specific aspects of the organization to evaluate possible courses of action

-Assign specific data-gathering tasks to members of the team, and realistic due dates for assembling this data. On the basis of these due dates, the organization will schedule its second five-day session

INTERSESSION FOR DATA GATHERING

The length of time between the two sessions is determined by the quantity and availability of the information required. This interim ranges from two to six months. While it should be kept as short as possible to conserve the momentum of the process, it is essential that all necessary input data be converted into, and presented, in a meaningful form - before the second session begins.

The input data is submitted to the Director at least three weeks before the second session. Depending on the firmness of the tentative objectives set in the first week, teams may also wish to assemble data for alternative strategies to achieve objectives.

THE SECOND FIVE-DAY SESSION

Following the data-gathering phase, the planning team has analyzed enough information to be able to recognize significant internal trends - and their relationship to outside influences. It is now ready to:

-Define planning "gaps" - the difference between where the organization is going and where it wants to go

-Modify preliminary objectives

-Analyze alternative courses of action

-Break down strategic courses into specific action assignments, listing exact standards of performance and estimated times of completion

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- -Design specifications for supplementary planning efforts to be carried out in subordinate units of the organization

- -Agree on the timing, degree of detail and format in which planning decisions will be communicated by top management to other areas of the organization

- -Develop a guide for future planning

RESULTS OF THE PLANNING PROCESS

Upon conclusion of the two-week educational strategic planning sessions at AMA's Center for Planning and Development, the planning team will have developed:

- -The skills necessary for continued effective planning

- -A working plan which includes both short- and long-term objectives and strategies for their achievement

- -An action plan with assignments and deadlines

- -A system for insuring control that assures continuing vitality of the planning process

- -An explicit procedure for regularly reviewing, revising, and updating the plan on an established time schedule

- -A base upon which additional management techniques such as divisional or functional planning, management control systems, executive development, and standards of executive performance may be structured

- -Top management team involvement in, and commitment to, the achievement of the company objectives

AMERICAN MANAGEMENT ASSOCIATION

TOP MANAGEMENT BRIEFING

The Top Management Briefing is designed to help top-level managers. The Briefing is the direct result of the expressed needs of modern organizations for off-the-job training that would help their top-level managers develop truly professional management skill and competence. It is geared to help the manager cope with problems of the changing structure of society and organizational development.

How is all this translated into a plan of improved management in your company?

- Managers learn to work together for common corporate goals.
- They study and master the skills and tools of modern management.
- They establish and are directed by personal and professional codes of ethics.
- They develop mature attitudes of responsibility.
- They learn self-appraisal and are motivated to self-improvement.
- They continue to grow professionally, making it possible for the organization to grow too.

Team attendance at this meeting enables top-level managers to return to their companies better equipped to tackle current management trouble spots - armed with a common understanding of the most modern management tools and techniques.

BRIEFING PROGRAM

I. DEFINITION AND SCOPE OF MANAGEMENT

  A. The Nature Of Management - a concept - a frame of mind

  B. Management Definitions

II. BASIC MANAGEMENT PROCESSES AND SKILLS (In Brief) USEFUL IN DEVELOPING:

  A. Objectives And Plans - How the top manager participates in the creation, visualization and clarification of that which his organization wishes to achieve.

II. BASIC MANAGEMENT PROCESSES AND SKILLS (In Brief) USEFUL IN DEVELOPING: Continued

B. Climate - The type of climate within which a particular enterprise can function - the development of the institutional character of the organization.

C. Organization - Where the top manager fits into the overall management team and his responsibilities.

D. Controls

E. Decision-Making Effectiveness - How the top manager can improve his performance in this area.

F. Leadership - How the top manager can increase his ability to motivate people.

III. BASIC MANAGEMENT PROCESSES AND SKILLS (In Greater Detail)

A. Plans and Control

B. Organization

C. Appraisal of Personnel

D. Leadership